Washington Agricultural Statistics 1990-1991

WASHINGTON AGRICULTURAL STATISTICS

1990-91 ANNUAL **PUBLISHED: OCTOBER 1991**

Prepared By:
WASHINGTON AGRICULTURAL STATISTICS SERVICE
6128 Capitol Boulevard
TUMWATER, WASHINGTON 98501
(206) 586-8919

DOUGLAS A. HASSLEN, STATE STATISTICIAN
JERRY McCALL, DEPUTY STATE STATISTICIAN

SUPPORT & ADMINISTRATION

MARILYN S. LEMAN
GAIL SPAIN

SURVEY & FIELD CROPS	FRUIT, FIELD CROPS & VEGETABLES	LIVESTOCK & SPECIAL SURVEYS	DATA PROCESSING
JOE P. ROSS, LDR.	HARRY NISHIMOTO, LDR.	KIM RITCHIE, LDR.	LEO ZEGGERT, LDR.
JAMES J. COX	DON GEPHART	FRANK J. HAMMEL, JR.	JAN STAVEE
DAVID REED	LEEONA YEE	MARY ERICKSON	
CHERYL ITO		PAULA QUARTANO	
FRANKIE BIGGS		MELISSA LOOMIS	

STUDENT ASSISTANTS - TERESA CHAMBERS
DOUG COX

Issued Cooperatively By:

STATE OF WASHINGTON
DEPARTMENT OF AGRICULTURE

C. ALAN PETTIBONE, DIRECTOR
ART SCHEUNEMANN, ASST. DIRECTOR
MARKET DEVELOPMENT

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATIONAL AGRICULTURAL
STATISTICS SERVICE

CHARLES E. CAUDILL, ADMINISTRATOR
FRED S. BARRETT, DIRECTOR, STATE OFFICES

STATE OF WASHINGTON
OFFICE OF THE GOVERNOR

OLYMPIA
98504-0413

BOOTH GARDNER
GOVERNOR

August 1991

MESSAGE FROM THE GOVERNOR

I am pleased to join with the Washington State Department of Agriculture and the Washington Agricultural Statistics Services to present you with this factual view of Washington agriculture, one of our state's most important industries.

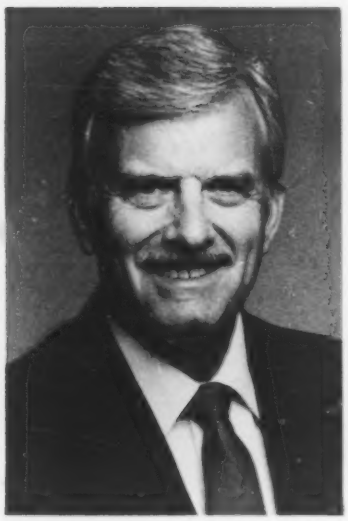
As governor, I am acutely aware and concerned that our state's diversified agricultural industry is experiencing tremendous pressure. Several of our most vital agricultural commodities have been suffering from deflated prices while cost of production continues to rise. Because farmers manage some of our most important natural resources, it is important that we make sincere efforts to maintain our agricultural economy in the face of these pressures.

A strong and viable agricultural sector is one of the cornerstones of our economy. The decisions that I must make in guiding our state depend greatly on having current, factual information. This type of information is found in this booklet and in the many reports that are issued throughout the year. It is obvious that the involvement and cooperation of the agricultural industry is critical in helping to provide this information. My thanks to all who voluntarily provided information to make these reports possible.

Booth Gardner
Governor

C. ALAN PETTIBONE
Director

STATE OF WASHINGTON
DEPARTMENT OF AGRICULTURE
406 General Administration Bldg., AX-41 • Olympia, Washington 98504-0641 • (206) 753-5063



This past year has been an especially challenging and interesting year for Washington agriculture. Public concern about environmental protection continued to grow as evidenced by discussions and actions in such areas as food safety, wetlands protection, pesticide use and endangered species. As president of the National Association of State Departments of Agriculture (NASDA) this past year, I have been able to give some direction on a national level to areas that are of special interest to us in the Pacific Northwest, specifically re-registration of pesticides for minor crop use, international trade and endangered species. Even states that are not currently being pressured by these issues will be eventually, and recognize they need to look at alternatives.

During my year as president of NASDA, I have traveled to many parts of the country and met with agricultural leaders in those areas. It has been encouraging to see that the agricultural leaders in our state are in the forefront of these controversies and are providing leadership in efforts to discuss and resolve the issues.

A key component to addressing any issue is having sufficient and accurate information. One of many sources we use when seeking solutions and analyzing alternatives is the data contained in this publication, *Washington Agricultural Statistics*. This is our annual summary and part of an extensive schedule of reports issued by the Washington Agricultural Statistics Service. This statistical program is a joint effort of the Washington State Department of Agriculture and the National Agricultural Statistics Service, USDA. Through this cooperative arrangement, we are able to provide a comprehensive program of agricultural data without duplication of resources.

Our statistical work reflects the needs of the day. For example, to obtain factual data on usage, the Washington Agricultural Statistics Service will be conducting a comprehensive survey of chemical usage in the fruit industry this fall. The data will provide information on the quantity of chemicals being applied in the fruit industry and will be extremely useful in discussion of food safety and pesticide use issues.

The data for this survey and the data in this publication are supplied by thousands of our state's farmers, agribusinesses, and others. Each of those individuals has my sincere thanks for the important role they play in making this publication and other agricultural reports possible.

Sincerely,

C. Alan Pettibone

C. Alan Pettibone
Director

Cover photograph courtesy of David C. Grusenmeyer, Extension Dairy Agent, Washington State University Cooperative Extension/Whatcom County.

TABLE OF CONTENTS

GENERAL

Value of Production 6
Top Forty Agricultural Commodities 7
Washington's Rank in Agriculture 8
Number of Farms and Land in Farms 9
Record Highs and Lows 10-11
Season Review and Weather 12-17
Prices Received 18-19
Prices Paid 20-22
Index of Prices 23
Farm Economics 24-25
Farm Labor 26
Floriculture 27-29
Usual Planting and Harvesting Dates 30
Estimates Schedule 140

FIELD CROPS

General Information 31
Acreage, Production, Price and Value 32-33
All Wheat 34-35
Winter Wheat 36
Spring Wheat 36
Wheat Varieties 1991 37-41
Winter Wheat 1989-90 42-43
Spring Wheat 1989-90 44-45
Barley 46
Barley Varieties 1991 47-49
Barley 1989-90 50-51
Oats 52-53
Corn, For Grain and Silage 54-56
Hay 57-59
Dry Beans 60-61
Potatoes 62-67
Mint 68-69
Hops 70-71
Grass Seeds 72-73

FRUITS

General Information 74-75
Production, Price, and Value 76-77
Production by Fruit Districts 78
Harvesting Costs 79
Apples 80
Refrigerated Space 81
Grapes 82-83
Apricots 84
Peaches 84
Sweet Cherries 85
Bartlett and Other Pears 86
Prunes 87
Filberts 87

VEGETABLES

Acreage, Production, and Value 88-89
Asparagus 90
Carrots 91
Sweet Corn, Fresh Market 92
Sweet Corn, Processing 93
Green Peas, Processing 94
Lettuce 95
Dry Onions 96
Mushrooms 97

BERRIES

General Information 98
Acreage, Production, and Value 99
Strawberries 100
Red Raspberries 101
Blueberries 102
Cranberries 103

LIVESTOCK

General Information 104
Value of Production 1987-91 104
Inventory and Value 105
Cattle and Calves 106-107
Cattle on Feed 108-109
Milk Production, Utilization, Marketing, and Value 110-111
Dairy Products 112-121
Hogs 122-123
Sheep and Lambs 124-125
Poultry 126-127
Mink 128
Bees and Honey 129
Livestock County Estimates 130-136
Aquaculture 137-139

VALUE OF PRODUCTION RECORD HIGH

The value of production for Washington's agricultural commodities exceeded $4 billion for 1990. The value of production was a record $4.3 billion, exceeding the previous record set in 1989 at $3.9 billion. The value of production is calculated by multiplying the production by the season average price for each commodity.

The grouping of commodities show Fruit, Livestock, and Specialty Products registering increases while the Field Crops, Vegetables, Seed Crops and Berry Crops show a decrease. The total value of fruit exceeded $1 billion and is double the level of the early 1980's.

Washington produces over 100 different crops of which 40 account for 87 percent of the total value of production. The top six commodities, apples, milk, cattle and calves, wheat, potatoes, and hay account for a full 67 percent of the total.

Apples were the big gainers in 1990 as the season average price was very strong boosting the value of the crop to $776 million and making apples Washington's number one agricultural commodity. Washington accounted for half of the national supply of apples. Milk dropped to number two on the State's crop commodity list to $604 million. Cattle and calves were the third most valuable commodity with a value of $481 million.

Wheat ranked number four in 1990 with a farmgate value of $405 million. Production was up 36 percent; however, the season average price of $2.70 per bushel was $1.34 lower than the previous year. Potatoes held the fifth position with $333 million.

Washington's diversity is apparent with the comparison of the top forty commodities. The importance of the State is illustrated by Washington's rank as the leading state for 10 commodities and in the top 10 for an additional 18 commodities.

Value of Production, Washington

Year	Field Crops	Fruit & Nuts	Vege-Tables	Seed Crops 1/	Berry Crops	Total Crops	Specialty Products 2/	Livestock & Products	State Total
	1,000 Dollars								
1976	920,547	283,467	92,295	30,320	14,988	1,341,617	108,776	483,460	1,933,853
1977	753,390	361,917	86,718	27,073	18,176	1,247,274	149,987	487,483	1,884,744
1978	955,076	417,810	103,679	35,325	20,840	1,532,730	141,595	602,144	2,276,469
1979	1,012,707	457,566	127,098	31,969	21,905	1,651,245	186,000	765,929	2,603,174
1980	1,432,130	369,823	119,527	41,795	17,263	1,980,538	160,400	810,984	2,951,922
1981	1,411,703	438,382	138,790	31,975	22,279	2,043,129	173,192	881,843	3,098,164
1982	1,356,088	388,951	144,915	N/A	28,788	1,918,742	170,089	892,485	2,981,316
1983	1,484,640	502,141	138,770	N/A	26,750	2,152,301	179,020	908,434	3,239,755
1984	1,508,748	461,495	149,682	N/A	21,125	2,141,050	195,398	939,523	3,275,971
1985	1,229,633	490,021	155,976	25,195	27,369	1,928,194	215,693	885,151	3,029,038
1986	1,054,581	683,039	162,274	26,151	24,077	1,950,122	226,690	886,314	3,063,126
1987	987,515	555,487	171,064	35,618	31,106	1,780,790	274,326	924,501	2,979,617
1988	1,384,026	724,227	191,216	40,503	32,260	2,372,232	314,349	1,031,848	3,718,429
1989	1,385,517	734,004	219,615	31,792	33,558	2,404,486	374,958	1,127,044	3,906,888
1990	1,354,288	1,034,940	210,348	28,063	25,983	2,653,622	382,915	1,251,379	4,287,916

1/ Seed crops not available for 1982-1984 due to program modifications.

2/ Includes forest products, nursery products, greenhouse products, other horticultural products, and mushrooms.

Top Forty Agricultural Commodities, Washington

Commodity	Rank			Value of Production			% Change
	1988	1989	1990	1988	1989	1990	1990 vs 1989
				1,000 Dollars			
Apples	2	3	1	505,050	466,000	775,650	66
Milk	3	1	2	495,851	559,210	603,661	8
Cattle and Calves	4	4	3	401,461	402,172	480,836	20
Wheat	1	2	4	522,158	446,864	405,216	-9
Potatoes	5	5	5	284,625	331,197	333,102	1
Hay	6	6	6	222,391	251,853	276,568	10
Nursery & Greenhouse Products	7	7	7	130,000	140,000	150,000	7
All Pears	8	8	8	90,486	105,026	110,976	5
Eggs	11	9	9	55,402	79,131	79,472	0
Sweet Cherries	10	11	10	60,918	67,390	62,602	-7
Hops	12	13	11	54,061	57,691	60,396	5
Grapes	14	10	12	44,601	69,158	56,877	-18
Asparagus	13	14	13	47,198	55,074	54,916	0
Chickens & Broilers	16	15	14	41,661	51,363	51,132	0
Barley	9	12	15	85,064	65,082	48,633	-25
Mint Oil	18	19	16	35,046	31,514	41,816	33
Sweet Corn, All	19	17	17	33,441	38,864	39,469	2
Corn, Grain	17	16	18	40,800	44,888	38,500	-14
Aquaculture 1/	15	19	19	41,778	33,207	28,194	-15
Onions	20	18	20	26,776	36,001	26,286	-27
Corn, Silage	21	21	21	24,000	25,000	24,840	-1
Green Peas, Proc.	23	20	22	21,361	25,977	23,878	-8
Dry Edible Beans	24	22	23	20,850	23,968	18,878	-22
Alfalfa Seed	27	24	24	16,770	17,582	18,573	6
Dry Edible Peas	22	23	25	21,593	22,365	17,462	-22
Carrots	26	26	26	17,412	14,407	15,001	4
Peaches	30	29	27	9,660	11,212	13,498	20
Hogs & Pigs	32	30	28	8,717	9,411	11,581	23
Lentils	29	27	29	10,056	11,664	10,591	-9
Mushrooms	33	33	30	7,327	8,306	9,915	19
Red Raspberries	28	25	31	13,482	16,269	8,600	-47
Lettuce	37	34	32	5,141	8,120	7,728	-5
Kentucky Bluegrass Seed	25	28	33	20,064	11,470	7,600	-34
Cranberries	35	35	34	6,062	6,677	6,619	-1
Strawberries	34	36	35	6,838	5,440	6,446	18
Wrinkled Seed Peas	36	31	36	5,275	9,104	5,118	-44
Mink	31	32	37	9,219	6,198	4,344	-30
Apricots	41	41	38	4,162	2,236	4,291	92
Blueberries	38	38	39	4,932	4,326	3,720	-14
Sheep, Lambs & Wool	40	37	40	4,342	4,624	3,293	-29

1/ The Department of Fisheries State of Washington annually calculates the value of aquaculture production. The 1990 data are preliminary.

Washington's Rank in the Nation's Agriculture

Item	Rank Among States 1990	Rank Among States 1989	Washington Production 1990	Unit	Washington Percent of U. S.	Leading State
			1,000 Units			
Crops						
Hops	1	1	41,942	Lbs.	73.8	Washington
Lentils	1	1	595	Cwt.	68.0	Washington
Dry Edible Peas	1	1	1,602	Cwt.	67.5	Washington
Spearmint Oil	1	1	1,676	Lbs.	65.3	Washington
Peppermint Oil	2	2	1,683	Lbs.	24.2	Oregon
Potatoes, Fall	2	2	67,980	Cwt.	17.3	Idaho
Wheat, All	4	5	150,080	Bu.	5.5	Kansas
Barley	6	5	22,620	Bu.	5.4	North Dakota
Dry Edible Beans	9	7	912	Cwt.	2.8	Michigan
Fruit						
Apples, All	1	1	2,400.0	Tons	49.5	Washington
Grapes, Concord	1	1	142.0	Tons	42.2	Washington
Sweet Cherries	1	1	66.0	Tons	42.1	Washington
Pears, All	1	1	372.0	Tons	38.6	Washington
Apricots	2	2	7.2	Tons	5.9	California
Grapes, All	2	2	180.0	Tons	3.2	California
Prunes and Plums	2	2	14.0	Tons	3.3	California
Peaches	5	7	26.5	Tons	4.4	California
Vegetables						
Carrots, Processing	1	1	122.0	Tons	27.6	Washington
Asparagus	2	2	1,020.0	Cwt.	41.7	California
Green Peas, Processing	3	3	94.4	Tons	17.9	Wisconsin
Sweet Corn, Processing	3	3	471.8	Tons	15.1	Wisconsin
Dry Onions, All Summer	6	5	3,400	Cwt.	7.5	California
Berries						
Red Raspberries	1	1	23,000	Lbs.	51.7	Washington
Cranberries	5	5	155	Bbls.	4.6	Massachusetts
Strawberries, All	6	6	126	Cwt.	1.1	California
Livestock						
Mink	6	6	172	Pelts	5.1	Wisconsin
Milk Production	9	10	4,398,000	Lbs.	3.0	Wisconsin
Milk Cows 1/	10	11	237	Head	2.3	California
Honey	12	17	4,400	Lbs.	2.2	Florida
Eggs Produced	17	16	1,287,000	Eggs	1.9	California
Farm Chickens 2/	17	16	6,429	Head	1.8	California
Broilers Produced	19	19	33,300	Head	0.6	Arkansas
All Cattle and Calves 1/	27	29	1,340	Head	1.3	Texas
Sheep and Lambs 1/	28	28	81	Head	0.7	Texas
Hogs and Pigs 2/	33	34	56	Head	0.1	Iowa

1/ January 1, 1991/1990 Inventory. 2/ December 1, 1990/1989 Inventory.

Number of Farms and Land in Farms 1/

Year	Washington			United States		
	No. of Farms	Land in Farms, Acres	Avg. Size of Farm	No. of Farms	Land in Farms, Acres	Avg. Size of Farm
	1,000	1,000	Acres	1,000	1,000	Acres
1977	34.0	16,100	474	2,456	1,047,785	427
1978	36.0	16,100	447	2,436	1,044,790	429
1979	37.0	16,300	441	2,437	1,042,015	428
1980	38.0	16,300	429	2,440	1,038,885	426
1981	39.5	16,400	415	2,440	1,034,190	424
1982	39.0	16,400	421	2,407	1,027,795	427
1983	38.0	16,300	429	2,379	1,023,425	430
1984	38.0	16,100	424	2,334	1,017,803	436
1985	38.0	16,100	424	2,293	1,012,073	441
1986	38.0	16,000	421	2,250	1,005,333	447
1987	38.0	16,000	421	2,213	998,923	451
1988	38.0	16,000	421	2,197	994,543	453
1989	38.0	16,000	421	2,171	991,153	457
1990	37.0	16,000	432	2,140	987,420	461
1991 2/	37.0	16,000	432	2,105	982,576	476

1/ A place with annual sales of agricultural products of $1,000 or more.
2/ Preliminary.

Farm Numbers

The number of farms in Washington as of June 1, 1991 was 37,000, unchanged from a year earlier. The land in farms remained constant at 16 million acres.

The number of farms in the $1,000-$9,000 sales class accounted for 20,600, or 56 percent of all farms. This group had 900,000 acres or 6 percent of the State's land in farms. The largest farms, annual sales of $100,000 or more, accounted for 7,400 farms or 20 percent of the farms and had 65 percent of the land in farms. The number of farms and land in farms by sales class is a new series of estimates.

The number of farms in the United States is estimated at 2.105 million, down 2 percent

Number and Land in Farms, Washington, June 1 1/

Year	Economic Sales Class			Total
	$1,000-$9,999	$10,000-$99,000	$100,000 & Over	
	Number of Farms			
1989	21,100	9,500	7,400	38,000
1990	20,500	9,200	7,300	37,000
1991 2/	20,600	9,000	7,400	37,000
	Land in Farms (1,000 Acres)			
1989	900	4,750	10,350	16,000
1990	950	4,750	10,300	16,000
1991 2/	900	4,700	10,400	16,000
	Average Size of Farm (Acres)			
1989	43	500	1,399	421
1990	46	516	1,411	432
1991 2/	44	522	1,405	432

1/ A place with annual sales of agricultural products of $1,000 or more.
2/ Preliminary.

Record Highs and Lows in Washington Agriculture

Field Crops, Vegetables & Berries	Year Estimates Started	Record High or Low	Acreage		Yield			Production	
			Harvested	Year	Unit	Per Acre	Year	Total	Year
			1,000					1,000	
All Wheat	1879	High	3,200	1976	Bu.	64.2	1983	172,570	1983
		Low	82	1879	Bu.	12.5	1918	1,660	1880
Barley	1882	High	1,180	1985	Bu.	75.0	1980	63,700	1984
		Low	24	1882	Bu.	13.0	1918	672	1882
Oats	1882	High	270	1909	Bu.	68.0	1984	13,230	1909
		Low	30	1/	Bu.	33.5	1918	1,505	1977
Corn, Grain	1919	High	160	1982	Bu.	175.0	10/	24,000	1982
		Low	6	1948	Bu.	26.5	1934	318	1934
Corn, Silage	1919	High	67	1973	Tons	25.0	2/	1,340	1973
		Low	7	3/	Tons	6.9	1919	70	1920
Dry Edible Beans 4/	1929	High	73	1958	Cwt.	22.2	1983	1,402	1958
		Low	1	5/	Cwt.	2.2	1929	9	1930
Dry Edible Peas 6/	1929	High	390	1943	Cwt.	25.5	1980	5,259	1943
		Low	42	1929	Cwt.	7.1	1949	330	1929
Lentils	1949	High	163	1980	Lbs.	1,250	7/	163,000	1980
		Low	2	1949	Lbs.	230	1977	1,700	1949
Potatoes	1882	High	132	1990	Cwt.	550	1988	67,980	1990
		Low	8	1882	Cwt.	61	1883	551	1883
Hops	1915	High	31.3	1981	Lbs.	2,380	1926	59,470	1981
		Low	1.9	1923	Lbs.	1,340	1919	2,680	1919
All Hay	1909	High	1,046	1934	Tons	3.87	1990	3,056	1990
		Low	730	1987	Tons	1.58	1933	1,332	1909
Mint Oil 8/	1929	High	43	1978	Lbs.	118	1986	3,528	1978
		Low	0	1934	Lbs.	25	1932	13	1932
Asparagus	1923	High	32.00	9/	Cwt.	42	1945	1,024	1989
		Low	.45	1923	Cwt.	14	1924	7	1918
Carrots	1929	High	6.3	10/	Cwt.	520	9/	3,276	1989
		Low	.5	1925	Cwt.	150	1929	182	1929
Green Peas, Processing	1928	High	90.10	1968	Cwt.	41.2	1987	2,799	1965
		Low	1.44	1928	Cwt.	16.1	1940	274	1928
Lettuce	1918	High	5.00	1934	Cwt.	290	1989	677	1934
		Low	0.19	1918	Cwt.	100	1943	34	1918
Onions	1918	High	8.0	1990	Cwt.	459	1966	3,400	1990
		Low	0.8	1918	Cwt.	171	1921	182	1918
Snap Beans, Processing	1918	High	4.9	1968	Cwt.	122.1	1961	352	1968
		Low	0.1	11/	Cwt.	44.0	1928	6	11/
Sweet Corn, All	1934	High	58.4	1990	Cwt.	181	1989	9,711	1989
		Low	0.25	1934	Cwt.	42	1934	500	1934
Cranberries	1950	High	1.40	10/	Cwt.	162.0	1968	162,000	1968
		Low	.70	12/	Cwt.	42.7	1960	42,711	1960
Strawberries	1918	High	9.00	1932	Cwt.	96.0	1987	496	1966
		Low	1.80	1990	Cwt.	16.2	1930	66	1918
Alfalfa Seed 12/	1937	High	38.0	1973	Lbs.	730	1989	20,520	1973
		Low	1.7	1943	Lbs.	69	1939	190	1944
Kentucky Bluegrass Seed, All	1963	High	43.4	1973	Lbs.	667	1978	22,531	1971
		Low	16.7	1963	Lbs.	193	1977	3,910	1977
Red Clover Seed, All 12/	1935	High	13.0	1978	Lbs.	490	15/	3,900	1978
		Low	1.0	14/	Lbs.	125	1938	140	1935

1/ 1978, 1980, 1982, 1984, 1987. 2/ 1987, 1988, 1989. 3/ 1946, 1947. 4/ No estimates for 1931-36. 5/ 1930, 1937. 6/ Excludes both wrinkled seed peas and Austrian winter peas. 7/ 1975, 1976. 8/ Only peppermint before 1952. 9/ 1988, 1989. 10/ 1989, 1990. 11/ 1920, 1921, etc. 12/ 1920, 1921. 13/ 1950, 1951. Estimates for 1950-58, acreage only. 14/ Estimates discontinued for 1982-84. 15/ 1935, 1936, 1973. 16/ 1987, 1988.

Record Highs and Lows in Washington Agriculture (continued)

Fruit	Year Estimates Started	Record High or Low	Production		
			Unit	Total	Year
Apples	1889	High	Million Pounds	5,000.0	1/
		Low		13.6	1889
Cherries, Sweet	1934	High	Tons	89,000	1983
		Low		1,800	1966
Pears, Bartlett	1919	High	Tons	**177,000**	**1990**
		Low		28,925	1920
Pears, Other	1919	High	Tons	**195,000**	**1990**
		Low		10,250	1924
Grapes	1909	High	Tons	249,500	1987
		Low		900	2/
Prunes	1919	High	Tons	45,200	1935
		Low		9,100	1986
Apricots	1927	High	Tons	28,000	1947
		Low		800	1965
Cherries, Tart 3/	1934	High	Tons	7,100	1940
		Low		500	1961
Peaches	1899	High	Million Pounds	123.1	1947
		Low		1.0	1965

Livestock	Year Estimates Started	Record High or Low	Inventory Jan. 1 or Production		
			Unit	Total	Year
All Cattle	1867	High	1,000 Head	1,579	1980
		Low		81	1867
Milk Cows	1867	High	1,000 Head	380	4/
		Low		5	1867
Cattle and Calves on Feed	1930	High	1,000 Head	221	5/
		Low		6	1935
Chickens on Farms	1924	High	1,000 Head	8,250	1931
		Low		4,782	1953
Broilers	1934	High	1,000 Head	**33,300**	**1990**
		Low		450	1934
Hogs and Pigs	1867	High	1,000 Head	434	1944
		Low		10	1867
Sheep	1867	High	1,000 Head	815	1902
		Low		53	1985
Milk	1924	High	Million Pounds	**4,398**	**1990**
		Low		1,540	1924
Eggs	1924	High	Million Eggs	1,355	1985
		Low		626	1924
Mink Pelts	1969	High	1,000 Pelts	313	1969
		Low		142	1972
Bees	1913	High	1,000 Colonies	100	1959
		Low		51	1913

1/ 1987, 1989. 2/ 1909, 1910. 3/ Official estimates 1934-1971.
4/ 1943, 1944, 1945. 5/ October 1, 1984.

1990 SEASON REVIEW

Planting of the 1990 crop started in **late August** and **September 1989** with the planting of winter wheat. By **mid October**, 90 percent of the winter wheat had been sown and at the end of October, some areas of Adams and Lincoln Counties were showing moisture stress. Rain or showers occurred across the State each week during **November**. The continuous moisture slowed field activities. **December** had normal temperatures, but total precipitation was generally behind normal except for the northwest corner that experienced flooding.

January temperatures were above normal, and precipitation was generally light except for severe flooding along the Chehalis River in western Washington. The warmer weather allowed fruit tree and caneberry pruning to proceed ahead of schedule.

Heavy rains in western Washington caused extensive flooding during the first three weeks of **February** along the Chehalis River. Above normal temperatures across the State during the first week allowed some field activities to start. Calving and lambing were underway in many areas of the State.

Warm and wet spring weather was common throughout **March** across the State. Some counties in central Washington were still extremely dry and in need of moisture for the dryland farms. Field activities got an early start. Wheat, barley, potatoes, onions, dry peas, green peas, and sweet corn were being planted. Excellent weather caused pastures to green up and was favorable for the peak time of calving and lambing. Most livestock remained on winter feeding programs with some hay shortages being reported.

April temperatures were warm and above normal. This allowed field activities to advance at a rapid pace and crop development to progress ahead of normal. Small grain crop conditions were fair to good throughout the month. Planting, plowing, fertilizing, weed control, and irrigation work were the main field activities. Fruit tree bloom was in full swing during April with only minor scattered reports of frost damage. Chemical thinning sprays were applied to fruit trees.

Temperatures were mainly below normal for **May** with rain and showers falling weekly across the State. The damp weather caused increased reports of rust and Russian wheat aphids in the small grains. Douglas and Benton Counties indicated drought damage to wheat before the rains arrived. Cherries were harvested and cracking damage was reported across the State due to the rain. Asparagus was harvested along with many other vegetables.

Cool, wet weather dominated the State during **June**. Rains benefitted small grains and pastures, but damaged hay and cherries. The cool weather slowed development on many crops. Occurrence of rust, mildew, and aphids increased due to favorable weather conditions and were causing damage to small grains in many areas. Cherry, strawberry, and asparagus harvests were in full swing in June.

Scattered showers were received in the east and rain in the west each week of **July**, except for the third week. Most of the central and southeast areas of the State were dry and well below the normal precipitation. Small grain conditions deteriorated in many areas of central Washington where moisture stress was evident. The small grain harvest was 15 percent completed at the end of July. Harvest of hay, early vegetables, and fruit were active.

August began with hot and dry weather, allowing the harvest of small grains to be at a full pace. Dry and hot weather continued until the last two weeks when cool temperatures and rains were received in eastern Washington. There was concern of sprout damage to the crop left in the

fields that received the August rains. The apricot, cherry, nectarine, and peach harvests were completed during the month. The pear and apple harvests were approaching full swing by the end of the month.

Extremely dry and hot was the weather pattern of **September**. The small grain harvest was completed. There were several crops harvested during the month including potatoes, corn for grain, corn silage, hops, alfalfa and Timothy hay, mint, dry beans, dry peas, and lentils.

Fall rains arrived on the first day of **October** and fell each week during the month. Temperatures were well below normal throughout the month. The potato harvest was in progress throughout the month. The corn silage and dry bean harvests were completed and the corn for grain harvest was approaching the midway point.

Rain and cool temperatures were received across the State the first week of **November**. Heavy flooding occurred over the Thanksgiving weekend in western Washington causing heavy crop and livestock losses. Orchard cleanup and pruning activities were underway in the Basin area. The final stages of weaning, marketing, and working the cattle was in progress.

Flooding and saturated soils in western Washington during November continued in **December**. Temperatures were normal the first two weeks, then turned cold for the remainder of the month. Temperatures of 20 degrees below normal were common the final week. Flood cleanup continued in the west while the small grain farmers of the east were evaluating the damage caused by the harsh temperatures.

WEATHER STATIONS

The weather stations are shown in their relative location in the county map below. Data are from the National Oceanic and Atmospheric Administration annual summary.

AVERAGE TEMPERATURES (F) FOR 1990, WASHINGTON

STATION DISTRICT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
WEST													
BELLINGHAM	41.3	37.9	45.1	51.3	55.0	59.1	65.8	65.7	59.9	49.9	45.4	33.6	50.8
CENTRALIA	42.5	40.2	47.7	53.0	55.6	61.2	68.4	67.9	63.8	50.8	46.0	34.3	52.6
HOQUIAM	44.1	41.5	47.6	50.9	52.9	57.7	61.6	62.8	61.7	50.9	47.3	36.6	51.3
LONGVIEW	42.0	39.7	48.3	52.9	54.9	59.9	66.8	66.4	63.9	51.4	46.4	34.0	52.2
MONROE	41.1	39.7	45.9	51.8	54.2	60.1	66.9	66.8	62.2	49.4	45.9	33.6	51.5
OLYMPIA	40.3	37.4	44.2	49.6	52.5	57.7	65.8	66.0	61.1	48.5	44.0	32.6	50.0
QUILLAYUTE	42.5	39.8	45.1	48.9	51.4	55.9	61.4	61.5	59.9	48.3	45.3	36.3	49.7
SEA TAC	42.5	40.0	47.1	52.1	54.7	59.8	68.0	67.3	63.4	51.2	46.6	35.3	52.3
SEDRO WOOLLEY	41.7	37.5	46.5	51.6	54.8	59.0	65.4	65.7	60.1	50.7	45.8	33.5	51.0
VANCOUVER	41.9	39.7	47.9	52.7	54.4	61.4	67.6	67.3	63.4	50.4	45.6	33.1	52.1
CENTRAL													
BICKLETON	33.0	30.6	41.3	49.7	50.8	NA	69.1	67.7	NA	45.7	39.8	21.6	NA
CHELAN	35.0	30.7	43.6	55.0	57.8	65.2	75.3	73.8	67.4	48.8	42.0	22.8	51.5
CLE ELUM	33.5	31.0	41.7	49.2	51.8	59.5	68.7	68.5	62.7	45.1	39.7	22.5	47.8
CONCONULLY	30.8	25.9	41.2	50.5	51.8	59.6	69.5	68.8	64.7	43.8	36.1	16.8	46.6
DALLESPORT	40.9	39.5	48.0	57.2	58.5	66.6	76.3	74.9	70.4	53.3	46.9	29.0	55.1
KENNEWICK	42.2	39.4	47.1	58.0	60.4	68.8	78.1	75.2	70.3	52.7	48.0	27.4	55.6
WAPATO	37.9	37.0	46.8	57.1	58.1	67.2	76.7	73.9	69.4	49.6	44.2	24.4	53.5
WENATCHEE	37.0	33.8	46.5	57.9	61.2	NA	78.1	74.8	69.9	51.8	45.2	26.4	52.9
YAKIMA	36.5	35.2	44.3	53.4	55.0	63.7	73.2	70.1	65.4	46.8	41.6	22.8	50.7
NORTHEAST													
CHEWELAH	33.6	29.9	42.2	50.9	53.8	61.0	71.6	69.0	64.3	44.2	38.4	20.8	48.3
NEWPORT	34.4	30.0	41.6	51.9	54.2	59.3	69.5	68.6	63.0	43.9	37.5	21.1	47.9
NORTHPORT	31.0	28.8	42.2	52.7	55.3	61.5	70.6	69.2	64.4	45.2	38.0	20.2	48.3
SPOKANE	33.4	30.2	40.9	49.7	52.8	60.7	70.4	68.5	65.3	45.1	39.0	21.1	48.1
EAST CENTRAL													
EPHRATA	36.6	32.9	45.3	55.4	58.4	66.7	78.6	74.6	70.9	49.4	42.3	22.4	52.8
LIND	36.0	33.5	43.9	52.7	55.2	63.7	74.3	71.3	67.2	48.1	42.1	23.1	50.9
ODESSA	30.7	26.4	37.7	48.1	52.2	59.7	69.5	67.8	62.3	42.4	37.3	18.7	46.1
QUINCY	36.9	33.3	45.2	55.0	57.5	64.7	75.7	71.6	68.5	48.7	42.4	22.8	51.9
RITZVILLE	34.2	31.3	42.5	51.2	52.7	61.1	72.3	69.9	65.2	43.7	38.3	20.0	48.5
WILBUR	32.0	30.4	40.5	48.9	51.5	NA	71.7	69.5	65.4	42.7	37.4	20.4	NA
SOUTHEAST													
COLFAX	35.2	32.6	42.1	50.5	53.4	60.5	68.9	67.9	63.3	46.7	41.8	24.4	48.9
DAYTON	38.9	35.7	44.6	53.8	55.2	63.3	73.5	71.1	67.0	50.2	44.8	25.6	52.0
LA CROSSE	36.5	33.5	43.5	52.2	55.8	63.8	72.8	71.0	66.5	NA	42.6	24.0	NA
POMEROY	40.4	38.0	47.2	56.5	57.4	65.9	75.8	71.5	65.7	50.6	44.7	26.7	53.4
PULLMAN	33.9	32.0	41.3	49.8	51.6	58.9	68.1	67.6	64.4	46.5	40.0	22.8	48.1
ROSALIA	33.7	31.1	41.4	49.3	51.8	58.4	69.0	NA	64.5	45.9	40.0	22.8	NA
WALLA WALLA	40.0	38.1	47.2	56.5	57.8	66.8	77.9	75.1	71.5	52.6	46.7	26.3	54.7

AVERAGE TEMPERATURE DEPARTURES FROM NORMAL(F), 1990, WASHINGTON

STATION DISTRICT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
WEST													
BELLINGHAM	4.7	-2.9	2.5	3.7	1.5	0.7	3.7	3.8	2.5	-0.3	2.3	-5.6	1.4
CENTRALIA	3.5	-2.4	3.1	3.6	0.2	0.8	3.6	3.6	3.6	-1.5	1.6	-6.4	1.1
HOQUIAM	3.6	-1.8	3.3	3.0	0.0	0.9	1.7	2.2	2.5	-2.1	1.3	-5.5	0.8
LONGVIEW	3.2	-2.9	3.6	3.8	0.2	0.2	2.7	2.2	3.1	-1.8	1.4	-6.7	0.8
MONROE	2.8	-2.7	1.6	2.4	-1.1	-0.2	2.7	2.9	2.5	-2.9	1.8	-6.8	0.3
OLYMPIA	3.1	-3.4	1.5	2.3	-0.6	-0.7	2.8	3.5	3.0	-1.6	1.4	-6.4	.40
QUILLAYUTE	3.5	-1.9	2.9	2.9	0.4	0.8	2.4	2.3	3.1	-2.1	1.5	-4.5	0.9
SEA TAC	3.4	-2.8	2.9	3.4	-0.3	-0.4	3.2	3.2	3.4	-1.3	1.8	-5.7	0.9
SEDRO WOOLLEY	4.0	-4.2	2.8	3.0	0.4	.0	3.1	3.3	1.6	-0.5	2.0	-6.6	0.7
VANCOUVER	3.7	-2.7	2.8	3.0	-1.4	0.4	1.9	2.0	1.9	-2.8	0.8	-7.2	0.2
CENTRAL													
BICKLETON	4.8	-3.2	3.9	5.6	-1.0	NA	1.9	1.6	NA	-2.8	3.5	-9.7	NA
CHELAN	8.6	-2.4	3.3	5.3	-1.1	-1.0	2.6	2.3	5.0	-1.6	4.2	-7.4	1.5
CLE ELUM	7.2	-1.9	4.4	4.6	-0.7	0.2	2.7	3.9	5.8	-1.5	4.0	-7.4	1.8
CONCONULLY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DALLESPORT	7.5	-0.6	2.8	5.0	-1.6	-0.2	3.2	2.7	4.9	-0.7	4.7	-7.5	1.7
KENNEWICK	9.1	-0.6	1.1	4.5	-1.3	-0.1	3.1	2.2	5.7	-0.6	6.2	-8.6	1.7
WAPATO	6.9	-1.5	2.1	4.5	-3.2	-1.1	2.0	1.3	5.0	-3.0	4.0	-9.4	0.6
WENATCHEE	9.3	-1.2	3.8	6.2	1.0	NA	4.3	2.5	6.2	0.6	6.4	-5.2	NA
YAKIMA	8.3	-0.9	2.4	4.2	-2.3	-0.8	2.8	1.5	4.5	-3.1	3.4	-8.7	0.9
NORTHEAST													
CHEWELAH	9.9	-0.5	5.1	4.9	-0.3	0.4	5.6	4.1	7.5	-1.6	4.0	-6.9	2.7
NEWPORT	9.9	-0.8	6.0	7.4	1.3	-0.6	3.7	4.3	6.9	-1.3	3.9	-6.6	2.8
NORTHPORT	5.4	-3.2	3.3	4.1	-2.2	-2.5	0.8	1.1	4.7	-2.9	2.5	-8.7	0.2
SPOKANE	7.7	-2.2	3.3	3.9	-1.5	-1.0	0.7	0.4	5.9	-2.5	4.1	-7.9	0.9
EAST CENTRAL													
EPHRATA	10.4	-1.4	3.5	4.6	-1.9	-1.4	3.0	1.0	6.0	-2.3	4.9	-7.4	1.6
LIND	7.6	-2.5	2.5	4.3	-1.6	-0.5	3.0	1.8	5.3	-2.3	4.3	-8.5	1.1
ODESSA	3.3	-8.5	-3.0	-0.4	-4.5	-4.6	-1.4	-1.4	1.2	-7.0	0.2	-12.0	-3,2
QUINCY	11.4	-0.7	4.0	5.0	-1.2	-0.9	4.1	1.4	6.1	-1.4	5.7	-6.3	2.3
RITZVILLE	7.3	-2.7	3.0	4.4	-2.1	-1.4	2.4	1.4	4.3	-5.7	1.8	-10.3	0.2
WILBUR	7.0	-1.4	2.7	2.9	-2.7	NA	3.9	3.1	6.6	-4.9	2.1	-8.1	NA
SOUTHEAST													
COLFAX	5.6	-3.3	2.3	3.8	-0.8	-0.4	1.7	1.9	4.7	-1.9	3.7	-8.5	0.7
DAYTON	6.7	-2.5	2.1	5.1	-1.1	-0.1	2.6	1.8	5.3	-1.2	4.4	-9.7	1.1
LA CROSSE	6.6	-3.5	2.2	4.0	0.2	0.8	2.6	2.6	5.7	NA	4.1	-9.1	NA
POMEROY	8.4	-0.2	5.3	7.5	1.0	2.2	4.9	2.1	3.6	-0.9	4.6	-8.1	2.5
PULLMAN	5.7	-2.3	3.3	4.7	-1.0	-0.2	2.2	2.1	5.6	-2.4	2.9	-8.9	1.0
ROSALIA	6.4	-2.5	3.5	4.1	-1.0	-0.9	2.7	NA	6.5	-1.9	3.7	-7.8	NA
WALLA WALLA	6.7	-1.6	2.4	5.1	-1.3	-0.1	2.8	1.7	6.3	-1.2	4.9	-10.0	1.3

PRECIPITATION FOR 1990, WASHINGTON

STATION DISTRICT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
WEST													
BELLINGHAM	4.36	5.44	2.10	3.02	1.62	4.20	0.19	1.97	0.55	4.99	11.60	5.50	45.54
CENTRALIA	14.63	8.33	3.46	3.91	2.43	2.89	0.35	1.95	0.00	7.14	10.62	5.54	61.25
HOQUIAN	14.64	12.67	5.75	4.84	2.95	3.38	0.22	1.71	0.01	11.13	18.03	9.86	85.19
LONGVIEW	11.87	9.54	2.41	3.25	2.13	3.88	0.69	1.52	0.50	7.12	7.41	5.56	55.88
MONROE	9.73	4.61	4.15	4.04	3.57	3.76	0.55	1.06	0.28	8.65	9.26	5.51	55.17
OLYMPIA	14.53	8.52	3.54	3.29	2.06	2.86	0.32	1.79	0.03	6.34	15.06	5.05	63.39
QUILLAYUTE	17.09	15.85	8.68	5.51	4.59	6.47	0.95	2.30	0.38	15.85	22.59	16.79	117.05
SEA TAC	9.41	3.72	2.58	2.54	1.98	3.05	0.58	0.71	0.05	5.79	10.71	3.63	44.75
SEDRO WOOLLEY	6.73	7.20	5.78	3.31	2.00	7.44	1.19	2.75	1.40	8.12	16.50	6.78	69.20
VANCOUVER	9.27	3.92	2.96	2.41	2.47	1.65	0.69	0.91	0.26	5.71	4.31	3.58	38.14
CENTRAL													
BICKLETON	1.98	0.45	0.45	0.43	1.60	NA	0.14	1.58	NA	1.09	0.28	0.96	NA
CHELAN	2.74	0.48	0.54	0.42	1.80	0.89	0.32	1.21	0.00	1.02	0.80	0.59	10.81
CLE ELUM	7.65	3.78	0.59	1.94	1.91	1.33	0.45	2.81	0.06	5.98	8.96	2.07	37.53
CONCONULLY	1.99	1.36	0.90	0.86	5.51	2.22	1.07	1.76	0.13	0.66	0.83	0.65	17.94
DALLESPORT	3.10	0.42	0.66	1.89	1.79	0.37	0.07	1.03	0.14	1.14	0.83	1.20	12.64
KENNEWICK	0.53	0.69	0.38	0.75	.59	0.16	0.07	0.42	0.00	0.81	0.22	0.63	5.25
WAPATO	1.43	0.20	0.12	0.16	1.45	0.90	0.07	1.26	0.00	0.41	0.02	0.55	6.57
WENATCHEE	2.09	0.28	0.29	0.21	1.31	0.64	0.17	1.21	0.00	0.89	0.80	0.85	8.74
YAKIMA	1.47	0.11	0.21	0.18	1.13	0.31	0.02	2.00	0.04	0.45	0.00	0.24	6.16
NORTHEAST													
CHEWELAH	4.41	3.45	0.76	1.46	6.42	2.33	0.89	0.81	0.00	1.62	.82	1.78	24.75
NEWPORT	3.56	3.09	1.00	1.97	4.45	2.45	1.34	2.39	0.00	3.01	2.83	3.11	29.20
NORTHPORT	2.34	1.19	0.52	2.29	4.23	3.19	1.69	2.14	0.02	1.96	.96	2.72	23.25
SPOKANE	2.45	1.01	0.85	1.34	3.11	1.91	2.33	1.03	0.00	3.05	.84	1.69	19.61
EAST CENTRAL													
EPHRATA	0.74	0.55	0.50	0.22	1.36	0.38	0.64	1.20	NA	0.73	0.03	0.25	6.60
LIND	1.17	0.32	0.30	1.36	0.39	0.42	1.00	2.14	0.00	2.16	0.32	1.12	10.70
ODESSA	0.95	0.46	0.21	0.52	0.86	0.33	1.38	1.61	0.01	1.74	0.28	2.08	10.43
QUINCY	1.00	0.16	0.00	0.11	2.18	0.38	0.36	1.33	0.00	0.58	NA	0.00	NA
RITZVILLE	1.51	0.62	0.46	1.59	0.85	0.48	1.45	1.85	0.06	2.41	0.61	1.12	13.01
WILBUR	1.57	0.57	0.28	0.93	2.05	NA	1.04	1.09	0.00	1.46	0.22	0.99	NA
SOUTHEAST													
COLFAX	2.92	1.34	0.98	2.82	2.34	1.92	0.77	0.81	0.00	2.24	1.97	1.62	19.73
DAYTON	2.13	1.25	1.49	2.60	2.13	0.73	0.21	0.55	0.00	3.05	2.48	1.99	18.61
LA CROSSE	2.07	1.09	0.73	2.30	1.38	0.52	0.12	0.34	0.01	NA	1.22	1.84	NA
POMEROY	2.30	0.71	0.80	1.54	2.39	0.88	0.57	1.18	0.04	1.93	1.60	1.14	15.08
PULLMAN	4.40	1.46	0.90	2.81	2.55	1.22	0.78	0.83	0.03	2.54	3.66	1.91	23.09
ROSALIA	2.50	0.83	1.05	2.22	2.65	1.78	0.54	NA	0.00	2.73	1.59	1.75	NA
WALLA WALLA	1.68	1.13	1.96	2.51	3.35	0.67	0.38	0.91	0.00	3.51	2.00	1.83	19.93

PRECIPITATION, DEPARTURE FROM AVERAGE, 1990, WASHINGTON

STATION DISTRICT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
WEST													
HOQUIAM	3.69	4.45	-1.96	0.31	-0.01	1.29	-1.00	-0.07	-3.56	4.47	8.10	-1.74	13.97
BELLINGHAM	-0.43	1.93	-0.87	0.59	-0.39	2.49	-0.92	0.56	-1.50	1.50	6.96	.36	10.28
CENTRALIA	7.25	3.35	-1.27	0.90	0.40	1.11	-0.49	0.49	-2.22	3.01	4.18	-2.17	14.54
MONROE	3.07	-0.28	-0.55	0.47	0.75	1.30	-0.73	-0.94	-2.55	4.37	3.12	-1.36	6.67
QUILLAYUTE	2.02	3.75	-2.59	-1.59	-0.11	3.41	-1.37	-0.55	-4.89	5.34	8.65	0.48	12.55
LONGVIEW	4.91	5.13	-2.07	-0.05	-0.23	1.89	-0.16	-0.06	-1.71	3.05	1.13	-2.09	9.74
OLYMPIA	6.03	2.75	-1.31	0.16	0.21	1.42	-0.44	0.45	-2.33	1.66	7.48	-3.65	12.43
SEA TAC	3.37	-0.50	-1.01	0.14	0.40	1.67	-0.16	-0.56	-1.97	2.36	5.11	-2.70	6.15
SEDRO WOOLLEY	0.70	NA	1.79	-0.25	-0.63	5.15	-0.33	0.77	-1.69	3.77	10.73	NA	NA
VANCOUVER	2.56	-0.42	-0.85	-0.20	0.23	0.03	0.12	-0.31	-1.62	2.25	-1.30	-3.42	-2.93
CENTRAL													
BICKLETON	-0.62	-1.11	-0.70	-0.37	0.80	NA	-0.18	1.22	NA	.27	-1.83	-1.58	NA
CHELAN	NA	-0.55	-0.31	-0.42	1.18	0.29	0.02	0.66	-0.52	0.29	-0.63	NA	NA
CLE ELUM	3.51	1.32	-1.32	0.67	1.14	0.63	0.18	2.22	-0.75	4.35	5.45	NA	NA
DALLESPORT	0.22	-1.06	-0.44	1.39	1.34	0.06	-0.01	0.71	-0.24	0.21	-1.20	-1.51	0.53
KENNEWICK	-0.64	0.03	-0.16	0.29	NA	-0.28	-0.12	0.02	-0.37	0.25	-0.77	-0.55	-2.30
WAPATO	0.23	-0.44	-0.44	-0.35	1.00	0.37	-0.12	0.90	-0.34	-0.02	-0.91	-0.55	-0.67
WENATCHEE	0.72	-0.57	-0.31	-0.41	0.76	0.11	0.02	0.55	-0.35	0.32	-0.35	-0.60	-0.11
CONCONULLY	0.28	-0.03	-0.29	-0.20	4.06	1.01	0.47	0.56	-0.64	-0.27	-0.55	-1.24	3.16
YAKIMA	0.03	-0.63	-0.44	-0.32	0.65	-0.29	-0.12	1.64	-0.29	-0.02	-0.97	-1.06	-1.82
NORTHEAST													
CHEWELAH	NA	NA	-0.88	0.01	4.45	0.97	0.09	-0.31	-1.04	0.21	-1.64	NA	NA
NEWPORT	-0.41	0.44	-1.17	0.10	2.29	0.69	0.41	1.10	-1.32	0.94	-0.72	NA	NA
NORTHPORT	0.01	-0.45	-0.83	1.01	2.36	1.27	0.71	0.78	-1.14	0.55	-1.15	0.07	3.19
SPOKANE	-0.02	-0.60	-0.51	0.26	1.73	0.68	1.83	0.29	-0.71	1.97	-1.22	-0.80	2.90
EAST CENTRAL													
EPHRATA	-0.25	-0.12	-0.12	-0.31	0.82	-0.15	0.39	0.92	-0.32	0.24	-0.89	-0.89	-0.68
LIND	0.06	-0.51	-0.41	0.68	-0.42	-0.23	0.73	1.72	-0.49	1.41	-0.86	-0.19	1.49
ODESSA	-0.34	-0.44	-0.62	-0.13	-0.04	-0.24	1.07	1.23	-0.50	1.08	-1.03	NA	NA
QUINCY	0.01	-0.59	-0.66	-0.51	1.60	-0.13	0.10	0.97	-0.37	0.06	NA	-1.19	NA
RITZVILLE	0.09	-0.45	-0.45	0.77	-0.03	-0.28	1.11	1.39	-0.52	1.52	-0.86	-0.61	1.68
WILBUR	0.13	-0.45	-0.66	0.06	0.87	NA	0.59	0.39	-0.70	0.59	-1.36	-0.69	NA
SOUTHEAST													
COLFAX	0.18	-0.51	-0.83	1.24	0.88	0.57	0.27	-0.02	-0.94	0.79	-0.28	-1.42	-0.07
DAYTON	-0.47	-0.35	-0.34	1.13	0.80	-0.46	0.24	-0.21	-0.89	1.55	0.26	NA	NA
LA CROSSE	0.15	-0.17	-0.39	1.40	0.41	-0.38	-0.27	-0.26	-0.59	NA	-0.42	-0.33	NA
POMEROY	0.16	NA	-0.65	0.36	1.12	-0.19	0.15	0.42	-0.69	0.75	-0.11	NA	NA
PULLMAN	1.51	-0.63	-1.06	1.23	1.03	-0.27	0.25	-0.12	-0.96	0.93	1.02	NA	NA
ROSALIA	0.15	-0.73	-0.38	0.92	1.17	0.46	0.03	NA	-0.80	1.39	-0.42	-0.67	NA
WALLA WALLA	-0.74	-0.46	0.30	0.92	1.79	-0.37	-0.04	0.09	-0.95	1.97	-0.29	-0.65	1.57

Prices Received by Farmers, Washington

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Crop Year or Season Average 1/
							Dollars Per Bushel						
All Wheat													
1986	3.48	3.43	3.53	3.65	3.54	2.96	2.59	2.38	2.40	2.44	2.53	2.58	2.51
1987	2.62	2.74	2.83	2.81	2.78	2.68	2.53	2.56	2.63	2.76	2.72	2.74	2.82
1988	2.93	2.91	2.88	2.93	3.12	3.53	3.79	3.86	4.06	4.15	4.30	4.43	4.19
1989	4.56	4.57	4.39	4.42	4.33	4.14	4.26	4.26	4.21	4.19	3.94	4.28	4.04
1990	4.27	3.75	3.58	3.47	3.39	3.27	3.12	2.90	2.75	2.55	2.50	2.53	2.70
1991	2.62	2.64	2.53	2.96	3.06	3.09							
							Dollars Per Bushel						
Barley													
1986	2.11	1.95	1.91	1.90	1.91	1.58	1.45	1.49	1.66	1.66	1.68	1.61	1.67
1987	1.73	1.79	1.85	1.88	1.90	2.04	1.92	1.82	1.85	1.84	1.89	1.92	1.87
1988	1.91	1.84	1.77	1.83	2.00	2.46	2.43	2.51	2.40	2.36	2.44	2.37	2.45
1989	2.41	2.41	2.50	2.52	2.58	2.46	2.35	2.36	2.15	2.05	2.34	2.47	2.29
1990	2.49	2.34	2.41	2.42	2.73	2.50	2.23	1.94	1.98	2.13	2.29	2.34	2.15
1991	2.37	2.27	2.08	2.17	2.04	2.08							
							Dollars Per Cwt.						
Potatoes													
1986	3.70	3.70	3.65	3.80	3.65	4.25	4.25	5.20	3.90	3.75	4.20	4.45	4.30
1987	4.50	4.35	4.30	4.60	4.65	5.00	4.10	4.05	3.30	3.40	3.30	3.80	3.65
1988	3.85	3.60	3.90	3.85	3.90	3.80	4.00	5.35	3.75	3.60	4.75	4.50	4.50
1989	4.65	4.85	5.25	4.95	5.65	5.40	4.40	6.50	4.35	4.10	4.60	4.95	5.15
1990	5.00	5.55	6.05	6.20	6.60	6.95	5.25	8.35	5.15	4.10	4.35	4.40	4.90
1991	4.80	4.85	5.00	4.90	4.85	4.85	5.15						
							Dollars Per Ton						
All Hay													
1986	92.00	95.00	95.00	94.00	84.00	81.00	68.00	68.00	60.00	60.00	58.00	53.00	60.00
1987	52.00	48.00	45.00	40.00	57.00	57.00	54.00	58.00	52.00	52.00	54.00	51.00	54.50
1988	55.00	55.00	55.00	54.00	66.00	73.00	76.00	72.00	75.00	80.00	76.00	77.00	78.50
1989	83.00	83.00	87.00	89.00	95.00	88.00	87.00	82.00	86.00	90.00	87.00	92.00	89.50
1990	93.00	94.00	95.00	107.00	96.00	93.00	91.00	90.00	95.00	94.00	90.00	89.00	90.50
1991	87.00	82.00	85.00	79.00	79.00								
							Cents Per Pound						
Apples (Fresh Use)													
1986	18.7	18.9	18.9	19.3	24.8	25.5	28.5	31.0	18.9	16.2	15.5	15.3	18.6
1987	18.1	19.1	18.3	19.8	23.4	26.2	26.1	13.2	13.6	7.8	6.9	7.5	10.4
1988	9.2	11.2	10.6	8.7	9.9	10.1	23.1	30.8	25.2	17.8	16.7	16.5	16.1
1989	18.0	18.1	16.3	13.8	12.5	9.6	10.8	14.8	14.2	10.8	10.3	9.3	11.9
1990	10.6	10.5	10.7	10.9	11.5	13.6	20.4	23.1	25.4	18.0	18.7	20.2	21.1
1991	20.2	20.3	20.1	20.0	22.5	24.8	24.8	-					

1/ Crop year begins with month to right of heavy line. Data for 1991 are preliminary monthly prices.
- Not Available.

Prices Received by Farmers, Washington (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average
	Dollars Per Cwt.												
Cows 1/													
1986	32.60	35.00	36.50	32.60	34.10	33.70	35.50	35.30	35.30	34.60	33.80	34.60	34.30
1987	38.40	41.40	43.10	43.20	43.00	43.70	43.50	43.90	44.30	42.70	41.00	43.00	42.70
1988	44.80	46.70	48.10	47.50	48.40	42.80	45.10	46.50	45.00	42.40	42.00	42.90	45.30
1989	45.20	47.20	44.60	44.20	46.30	44.30	46.20	47.40	48.20	45.40	44.30	44.20	45.70
1990	48.90	49.60	50.90	49.40	51.10	51.40	51.00	52.40	49.50	46.30	45.10	44.80	49.30
Steers and Heifers													
1986	58.20	54.20	54.30	52.00	53.90	52.60	55.50	56.90	57.50	56.80	59.60	59.30	55.90
1987	59.30	61.60	61.60	65.80	67.00	66.20	62.50	62.50	62.90	66.00	63.80	63.90	63.60
1988	64.70	68.10	69.60	70.40	72.30	68.00	63.50	65.60	67.20	69.10	70.10	71.40	68.30
1989	70.70	73.00	74.40	73.70	73.20	70.90	69.90	73.40	68.20	70.00	70.90	67.80	71.30
1990	77.30	78.00	76.90	77.60	76.90	74.80	73.80	77.10	75.10	79.40	80.10	78.90	77.20
Calves													
1986	49.20	53.60	53.60	50.00	50.60	49.50	49.90	52.00	55.10	54.90	54.90	57.90	52.90
1987	64.00	66.80	71.10	71.60	74.60	74.40	74.90	75.00	73.90	81.30	79.60	80.30	76.00
1988	81.10	86.90	88.60	89.00	94.60	89.20	89.70	82.20	81.20	81.80	77.90	80.90	84.80
1989	82.70	83.40	81.40	81.40	79.90	89.70	83.80	82.40	83.70	82.80	79.30	79.30	82.30
1990	86.30	86.60	88.90	92.10	93.50	91.70	93.80	88.50	86.40	86.80	85.30	88.20	88.60
Milk Sold to Plants, All													
1986	12.00	12.00	11.80	11.80	11.80	11.70	11.80	12.00	12.30	12.50	12.70	12.80	12.10
1987	12.80	12.50	12.20	12.00	11.80	11.90	11.90	12.00	12.30	12.50	12.60	12.50	12.20
1988	12.40	12.10	11.80	11.50	11.30	11.20	11.30	11.60	12.20	12.60	13.20	13.30	12.00
1989	13.30	13.10	12.50	12.20	12.00	12.10	12.40	12.90	13.60	14.40	15.20	15.70	13.30
1990	15.70	14.10	13.20	12.90	13.30	13.70	13.90	14.00	13.40	12.70	12.20	11.20	13.30
	Dollars Per Head												
Milk Cows 2/													
1986	870	-	-	870	-	-	920	-	-	950	-	-	905
1987	1,020	-	-	1,080	-	-	1,090	-	-	1,100	-	-	1,070
1988	1,100	-	-	1,210	-	-	1,190	-	-	1,140	-	-	1,160
1989	1,140	-	-	1,150	-	-	1,150	-	-	1,180	-	-	1,160
1990	1,250	-	-	1,300	-	-	1,340	-	-	1,340	-	-	1,310

1/ Beef cows sold for slaughter and herd replacement, and cull dairy cows sold for slaughter.

2/ Dairy cows sold for dairy herd replacement. Prices estimated quarterly beginning January 1982.

Prices Paid by Farmers, Washington

Commodity/ Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	Dollars Per Ton											
Chick Starter												
1986 1/	183	205	-	-	-	-	-	-	-	-	-	-
1986 2/	184	183	-	184	-	-	185	-	-	197	-	-
1987 2/	176	-	-	164	-	-	221	-	-	172	-	-
1988 2/	184	-	-	183	-	-	255	-	-	232	-	-
1989 2/	219	-	-	222	-	-	217	-	-	217	-	-
1990 2/	218	-	-	216	-	-	229	-	-	209	-	-
Broiler Grower												
1986 1/	179	191	-	-	-	-	-	-	-	-	-	-
1986 2/	190	186	-	184	-	-	194	-	-	184	-	-
1987 2/	181	-	-	193	-	-	221	-	-	171	-	-
1988 2/	179	-	-	174	-	-	234	-	-	225	-	-
1989 2/	224	-	-	238	-	-	230	-	-	233	-	-
1990 2/	226	-	-	225	-	-	233	-	-	217	-	-
Laying Feed												
1986 1/	186	198	-	-	-	-	-	-	-	-	-	-
1986 2/	171	167	-	163	-	-	170	-	-	159	-	-
1987 2/	155	-	-	167	-	-	180	-	-	153	-	-
1988 2/	151	-	-	155	-	-	227	-	-	203	-	-
1989 2/	195	-	-	200	-	-	185	-	-	174	-	-
1990 2/	178	-	-	178	-	-	200	-	-	198	-	-
Dairy Feed 14% Protein												
1986 1/	160	159	-	-	-	-	-	-	-	-	-	-
1986 2/	152	152	-	149	-	-	144	-	-	136	-	-
1987 2/	144	-	-	143	-	-	144	-	-	136	-	-
1988 2/	141	-	-	150	-	-	163	-	-	172	-	-
1989 2/	171	-	-	171	-	-	166	-	-	161	-	-
1990 2/	164	-	-	169	-	-	172	-	-	166	-	-
Dairy Feed 16% Protein												
1986 1/	164	169	-	-	-	-	-	-	-	-	-	-
1986 2/	161	161	-	157	-	-	155	-	-	144	-	-
1987 2/	147	-	-	142	-	-	149	-	-	146	-	-
1988 2/	152	-	-	153	-	-	188	-	-	192	-	-
1989 2/	187	-	-	182	-	-	172	-	-	171	-	-
1990 2/	175	-	-	175	-	-	184	-	-	173	-	-

Prices Paid by Farmers, Washington (continued)

Commodity/ Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	Dollars Per Ton											
Soybean Meal												
1986 1/	17.50	16.00	-	-	-	-	-	-	-	-	-	-
1986 2/	15.70	16.80	-	16.40	-	-	15.10	-	-	17.00	-	-
1987 2/	16.90	-	-	16.50	-	-	17.20	-	-	16.70	-	-
1988 2/	18.50	-	-	19.00	-	-	21.50	-	-	21.40	-	-
1989 2/	20.80	-	-	20.70	-	-	23.00	-	-	21.80	-	-
1990 2/	12.10	-	-	20.80	-	-	21.30	-	-	19.80	-	-
Cotton Seed Meal												
1986 1/	21.00	22.00	-	-	-	-	-	-	-	-	-	-
1986 2/	12.40	13.30	-	13.10	-	-	13.30	-	-	13.70	-	
1987 2/	13.90	-	-	13.90	-	-	14.30	-	-	15.00	-	-
1988 2/	15.30	-	-	15.50	-	-	17.30	-	-	16.70	-	-
1989 2/	17.10	-	-	18.10	-	-	16.90	-	-	17.40	-	-
1990 2/	16.80	-	-	15.90	-	-	16.70	-	-	17.20	-	-
Gasoline, Unleaded Service Station	Dollars Per Gallon											
1986 1/	1.25	1.21	-	-	-	-	-	-	-	-	-	-
1986 2/	1.22	1.15	-	1.00	-	-	.95	-	-	.89	-	-
1987 2/	.86	-	-	.90	-	-	.97	-	-	1.02	-	-
1988 2/	.95	-	-	.95	-	-	.98	-	-	.96	-	-
1989 2/	.91	-	-	1.06	-	-	1.12	-	-	1.06	-	-
1990 2/	1.02	-	-	1.08	-	-	1.19	-	-	1.43	-	-
Gasoline, Regular Bulk Delivery												
1986 1/	1.20	1.14	-	-	-	-	-	-	-	-	-	-
1986 2/	1.13	1.06	-	.89	-	-	.87	-	-	.80	-	-
1987 2/	.81	-	-	.89	-	-	.90	-	-	.96	-	-
1988 2/	.89	-	-	.90	-	-	.94	-	-	.93	-	-
1989 2/	.87	-	-	1.06	-	-	1.09	-	-	1.04	-	-
1990 2/	.99	-	-	1.05	-	-	1.15	-	-	1.39	-	-
Diesel Fuel												
1986 1/	.97	.89	-	-	-	-	-	-	-	-	-	-
1986 2/	.97	.86	-	.63	-	-	.54	-	-	.59	-	-
1987 2/	.64	-	-	.60	-	-	.69	-	-	.81	-	-
1988 2/	.72	-	-	.74	-	-	.73	-	-	.68	-	-
1989 2/	.66	-	-	.88	-	-	.74	-	-	.87	-	-
1990 2/	.88	-	-	.80	-	-	.75	-	-	1.24	-	-

1/ State estimates were discontinued in March, 1986.
2/ Pacific Regional estimates (California, Oregon, and Washington) are made on a quarterly basis.

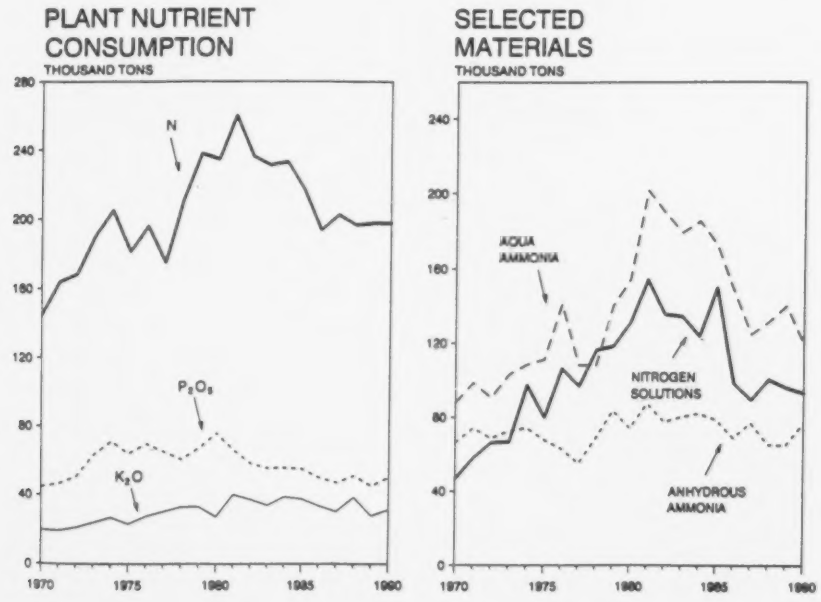
Prices Paid by Farmers, Northwest Region 1/

Item	Month	1986	1987	1988	1989	1990
		Dollars Per Ton				
Anhydrous Ammonia	April	344	306	308	309	301
	May	-	-	-	-	-
	October	306	291	295	298	312
	December	-	-	-	-	-
Nitrogen Solutions, 32%	April	170	155	160	184	169
	May	-	-	-	-	-
	October	165	152	161	182	170
	December	-	-	-	-	-
Superphosphate, 44-46%	April	200	210	222	225	219
	May	-	-	-	-	-
	October	200	216	223	232	225
	December	-	-	-	-	-

1/ Northwest Region includes Idaho, Oregon, and Washington.

Farmer's Fertilizer Usage, Washington

Overall, plant nutrient consumption increased in amount this year when compared to 1989. More Anhydrous Ammonia was applied, but the amounts of Aqua Ammonia and Nitrogen Solutions declined.



Source: Fertilizer Summary Data, 1990, Tennessee Valley Authority

Index of Prices Received and Paid by Farmers, United States

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Prices Received						1977=100							
	All Farm Products												
1987	121	122	122	125	129	130	128	126	128	129	131	127	127
1988	131	130	130	131	135	139	142	145	145	142	144	145	138
1989	150	149	150	148	149	147	148	145	144	145	146	149	147
1990	153	152	149	151	153	152	151	151	148	146	147	143	150
	All Crops												
1987	100	99	101	102	109	109	108	101	105	110	118	112	106
1988	115	110	112	114	118	130	137	138	136	131	136	135	126
1989	142	139	138	142	141	137	137	129	127	126	126	127	134
1990	135	133	129	131	134	130	129	125	123	120	124	121	128
	All Livestock and Products												
1987	141	144	142	147	148	149	148	150	152	147	143	141	146
1988	146	149	148	148	151	147	147	152	153	152	151	154	150
1989	158	159	161	155	156	157	157	161	160	162	165	169	160
1990	171	170	168	170	170	173	172	176	172	170	169	164	170
Prices Paid 1/													
	Commodities, Services, Interest, Taxes, and Wage Rates												
1987	158	-	-	162	-	-	163	-	-	165	-	-	162
1988	165	-	-	168	-	-	172	-	-	174	-	-	170
1989	176	-	-	178	-	-	179	-	-	178	-	-	178
1990	181	-	-	183	-	-	184	-	-	187	-	-	184
	Items Used for Production												
1987	143	-	-	147	-	-	149	-	-	151	-	-	148
1988	152	-	-	155	-	-	160	-	-	162	-	-	157
1989	164	-	-	166	-	-	166	-	-	165	-	-	165
1990	169	-	-	170	-	-	170	-	-	174	-	-	171
	Interest 1/ 2/					**Taxes 1/ 3/**				**Farm Services & Cash Rent 1/**			
1987	189					144				149			
1988	182					147				151			
1989	176					152				161			
1990	174					157				166			
	Wage Rates												
1987	158	-	-	170	-	-	173	-	-	161	-	-	166
1988	161	-	-	174	-	-	177	-	-	170	-	-	171
1989	186	-	-	186	-	-	189	-	-	178	-	-	185
1990	192	-	-	193	-	-	192	-	-	185	-	-	191
	Production Items, Interest, Taxes, and Wage Rates												
1987	148	-	-	152	-	-	153	-	-	154	-	-	152
1988	155	-	-	158	-	-	162	-	-	164	-	-	160
1989	166	-	-	168	-	-	168	-	-	166	-	-	167
1990	170	-	-	171	-	-	171	-	-	174	-	-	172
Ratio of Prices Received to Prices Paid 4/													
1987	77	77	77	77	80	80	79	77	79	78	79	77	78
1988	79	79	79	78	80	83	83	84	84	82	83	83	81
1989	85	85	85	83	84	83	83	81	80	81	82	84	83
1990	85	83	83	83	84	83	83	82	80	78	78	76	82

1/ Data for interest, taxes, farm service, and cash rent are collected yearly but used as a component of the monthly index.

2/ Interest on indebtedness secured by farm real estate.

3/ Taxes on farm real estate.

4/ Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and wage rates.

Gross and Net Farm Income, Washington 1/

Item	1985	1986	1987	1988	1989
	Million Dollars				
Cash Receipts From Marketings	2,829.0	2,809.5	2,859.2	3,336.2	3,639.0
Government Payments	155.0	298.7	292.2	207.9	131.1
Other Farm Income 2/	200.2	207.3	232.5	269.9	348.6
Non-Cash Income	181.8	159.2	171.1	167.2	156.6
Value of Inventory Adjustment	-112.2	27.2	200.5	-42.7	66.1
Total Gross Farm Income	**3,253.9**	**3,501.9**	**3,755.5**	**3,938.5**	**4,341.4**
Farm Production Expenses 3/	**2,530.0**	**2,470.5**	**2,513.1**	**2,666.9**	**2,870.6**
Total Net Farm Income	**723.9**	**1,031.4**	**1,242.3**	**1,271.6**	**1,470.8**

Farm Production Expenses, Washington 1/

Item	1985	1986	1987	1988	1989
	Million Dollars				
Intermediate Production Expense					
Farm Origin:					
Feed	325.6	339.4	319.7	363.9	413.7
Livestock & Poultry	81.9	75.3	115.6	175.6	132.0
Seed	54.3	55.2	56.3	56.4	64.5
Total	**461.8**	**469.8**	**491.6**	**596.0**	**610.2**
Manufactured Input:					
Fertilizer and Lime	165.9	151.2	143.8	151.0	168.4
Pesticides	112.4	115.2	123.3	121.4	156.3
Fuel and Oil	106.5	88.0	82.5	81.9	88.5
Electricity	43.8	42.9	52.8	54.6	51.4
Total	**428.7**	**397.3**	**402.3**	**408.9**	**464.6**
Other	438.1	434.4	456.0	460.3	535.1
Total Intermediate	**1,328.6**	**1,301.5**	**1,349.9**	**1,465.2**	**1,609.9**
Interest	359.6	328.0	302.3	303.6	303.5
Contract and Hired Labor	355.7	358.7	392.2	406.0	430.5
Net Rent to Nonoperator Landlords	118.1	141.6	148.3	153.4	172.8
Capital Consumption	279.9	253.2	226.5	242.7	253.7
Property Taxes	88.2	87.5	93.9	96.1	100.2
Total Production Expenses 3/	**2,530.0**	**2,470.5**	**2,513.1**	**2,666.9**	**2,870.6**

1/ Source: Economic Indicators of the Farm Sector, State Financial Summary, 1989, ERS, USDA, February 1991. Includes operator dwellings. Data may not add due to rounding.

2/ Includes Forest Product sales, custom feeding service, other farm business-related income, machine hire and custom work.

3/ Includes repair and maintenance; machine hire and custom work expenses; marketing, storage and transportation expense; and miscellaneous expenses.

Balance Sheet of Washington Farms, December 31 1/

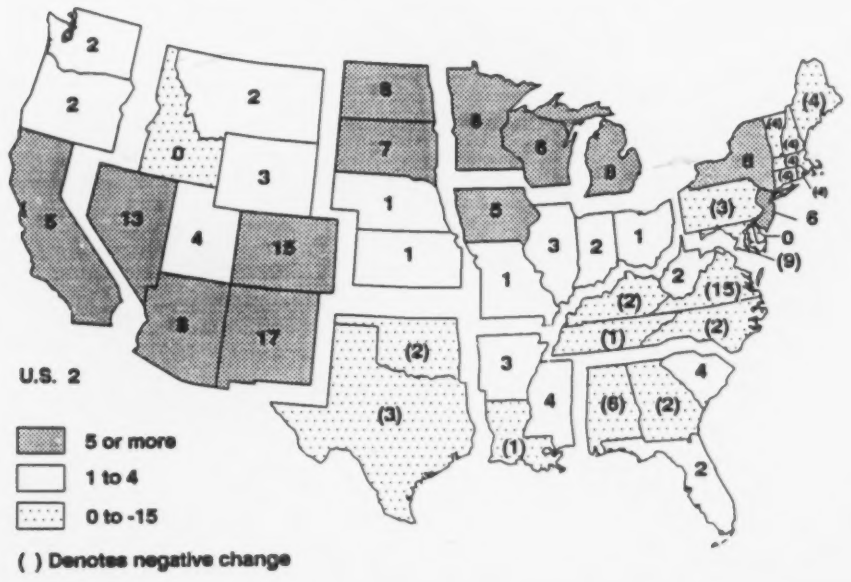
Item 2/	1985	1986	1987	1988	1989
	Million Dollars				
Total Farm Assets	17,563.6	16,218.5	16,271.3	17,114.4	18,046.0
Total Farm Debts	3,762.1	3,274.4	3,076.3	2,921.0	2,980.6
Debt/Asset Ratio, Total	**21.4**	**20.2**	**18.9**	**17.1**	**16.5**

1/ Source: Economic Indicators of Farm Sector, State Financial Summary, 1989, ERS, USDA, February, 1991.
2/ Includes operator households.

Average Value of Farm Land and Buildings

Date/ Year	California	Idaho	Oregon	Washington	U.S. Average
	Dollars Per Acre				
Apr 1, 1984	1,981	808	719	972	801
1985	1,841	739	615	943	713
Feb 1, 1986	1,730	631	570	840	640
1987	1,554	552	541	756	599
1988	1,575	572	542	739	632
1989	1,657	595	535	757	661
Jan 1, 1990	1,704	661	571	779	668
1991	1,787	659	583	798	682

Percent Change in Farmland Value Per Acre: January 1, 1990 to January 1, 1991



FARM LABOR

Farm employment data for the Pacific Region indicate that the number of all workers on farms increased during 1989 and the first three quarters of 1990, but they fell off the last quarter of 1990 and the first two quarters of 1991. The seasonal low usually occurs in January which showed 84 thousand workers in 1989, 108 thousand in 1990, and 78 thousand in 1991. July is usually the seasonal high for farm workers, with 186 thousand and 200 thousand for 1989 and 1990, respectively.

Farm wage rates have also been increasing for each quarter as compared with the same quarter a year earlier. The composite hourly wage rate for July 1990 was 33 cents higher than July 1989 and October 1990 was up 17 cents from October 1989. The January 1991 composite wage rate was 3 cents above January 1990 and April 1991 was 28 cents higher than April 1990. The average number of hours worked per week by all hired workers is fairly consistent from one year to the next. From January 1989 to April 1991, hired workers worked from a low 38.1 hours per week in April 1989 to a high 42.5 hours per week in October 1990.

Wage Rates and Hours Worked, Pacific Region 1/

Year and Month	Hired Hours Worked	Wage Rates			
		Field	Livestock	Field and Livestock	Composite Hourly Rate
	Hours/Weeks	Dollars per Hour			
1989					
January	38.4	5.50	6.04	5.68	6.12
April	38.1	5.15	5.86	5.25	5.52
July	41.7	4.71	6.02	4.86	5.18
October	41.0	6.09	6.08	6.09	6.27
1990					
January	41.0	6.09	6.44	6.19	6.69
April	41.2	5.28	6.40	5.47	5.79
July	41.8	5.25	6.33	5.30	5.51
October	42.5	6.37	5.87	6.28	6.44
1991					
January	38.7	6.08	6.53	6.28	6.72
April	41.5	5.74	5.95	5.78	6.07

Workers on Farms, Pacific Region 1/

Year and Month	Number of Workers			Hired		
	All Farm Workers	Self-Employed	Unpaid	Number of Workers	Expected to be Employed 150 Days or More	Expected to be Employed 149 Days or Less
	1,000 Workers					
1989						
January	84	46	8	30	23	7
April	128	60	11	57	36	21
July	186	69	21	96	40	56
October	158	63	15	80	33	47
1990						
January	108	65	7	36	28	8
April	145	69	20	56	35	21
July	200	59	26	115	33	82
October	138	52	13	73	35	38
1991						
January	78	42	6	30	23	7
April	120	47	9	64	42	22

1/ Washington and Oregon form the Pacific Region, individual state data not available. Includes all workers and all methods of pay except agricultural service workers.

FLORICULTURE

Washington's wholesale value of floriculture crops produced in 1990 increased to $54.1 million, up 15 percent from 1989 and 37 percent more than 1988. Producers utilized 6.4 million square feet of covered area and 1,115 acres of open ground to grow floriculture crops in 1990.

Data summarized in this report were provided by commercial growers of cut flowers, potted flowering plants, bedding plants and cut cultivated greens. A commercial grower, for the purpose of this survey, is defined as one who produces and sells $10,000 or more in gross sales of the items listed above in one year.

Sales represent both retail and wholesales quantities sold in the calendar year shown. Flowers, plants or materials purchased from others for immediate resale are excluded. All data for foliage and potted flowering plants represent only those grown for indoor or patio use. Value data for all crops except potted foliage are on a "gross wholesale" basis before deductions for sales commissions or transportation costs.

The "area used for production" is defined as the "gross" area used, including walkways and aisles. This area includes space used for growing floriculture crops under glass, plastic, cloth, lath and outdoors. The area is counted for each filling, if refilled several times with the same crop during the year or if refilled with different crops for all crops except potted foliage and cut cultivated greens. The area for potted foliage and cut cultivated greens is reported only once if refilled with potted foliage or cut cultivated greens. If refilled with cut flowers, potted flowering plants or bedding plants, the area is counted separately for each filling.

Growers, Growing Area, and Value of Sales

Year	Total Number of Growers	Covered Greenhouses			Total Greenhouse Cover
		Glass	Fiberglass	Film Plastic	
		1,000 Square Feet			
1988	137	2,497	917	3,371	6,785
1989	134	2,117	778	3,480	6,375
1990	158	1,698	656	3,788	6,142

Year	Shade and Temporary Cover	Total Covered Area	Open Ground	Total Wholesale Value Of Floriculture Crops
	1,000 Square Feet		Acres	$1,000
1988	251	7,036	1,870	39,413
1989	302	6,677	1,442	47,125
1990	220	6,362	1,115	54,138

Production, Sales, and Price

Item	Unit	Producers			Area in Production			Quantity Sold		
		1988	1989	1990	1988	1989	1990	1988	1989	1990
		Number			1,000 Square Feet			1,000 Units		
Chrysanthemums:										
Standard	Blooms	6	6	6	14	14	16	36	42	43
Pompon	Bunches	8	7	6	89	68	63	79	60	42
Potted	Pots	15	12	10	56	86	120	97	114	132
Hardy Garden	Pots	55	58	70	787	867	1,018	903	1,037	1,142
Other Cut Flowers		20	19	26	55,822	58,015	46,430	-	-	-
Other Potted Flowering	Pots	58	52	55	1,193	799	772	2,346	1,968	2,472
Geraniums:										
Bedding Plants	Flats	15	25	30	68	80	105	42	48	50
Potted, Cuttings	Pots	84	85	89	763	792	929	2,037	2,494	2,820
Potted, Seed	Pots	41	41	50	422	332	240	1,163	993	1,009
Hanging Baskets:										
Foliage	Baskets	30	34	37	-	-	-	228	200	207
Flowering	Baskets	106	105	123	-	-	-	346	443	475
Bedding Plants:										
Other Flowering and Foliage Type	Flats	88	87	98	1,217	1,604	1,882	702	1,004	1,083
Other Flowering and Foliage Type	Pots	86	78	86	4,593	5,479	4,265	7,463	11,082	11,898
Vegetable Type 1/	Flats	66	60	65	202	248	299	109	134	165
Vegetable Type 1/	Pots	55	49	60	348	306	298	704	1,091	1,144
Easter Lilies	Pots	15	14	15	64	71	68	115	110	111
Poinsettias	Pots	66	63	63	1,623	1,757	1,954	1,171	1,337	1,432

1/ Does not include vegetable transplants grown for use in commercial vegetable production.

- Data not collected.

Production, Sales, and Price (continued)

Item	Unit	Value of Sales at Wholesale 1/			Percent of Sales at Wholesale			Wholesale Price		
		1988	1989	1990	1988	1989	1990	1988	1989	1990
		$1,000			Percent			Dollars/Unit		
Chrysanthemums:										
Standard	Blooms	23	25	26	82	86	83	.65	.59	.60
Pompon	Bunches	184	143	108	75	90	83	2.33	2.39	2.58
Potted 2/	Pots	310	407	495	94	95	99	3.20	3.57	3.75
Hardy Garden 2/	Pots	907	1,160	1,151	95	96	96	.77	.81	.75
Other Cut Flowers		8,353	9,020	10,837	94	95	92	-	-	
Other Potted Flowering 2/	Pots	2,294	2,251	3,544	93	92	95	.67	.75	.69
Geraniums:										
Bedding Plants	Flats	220	398	470	88	61	84	5.42	8.29	9.40
Potted, Cuttings 2/	Pots	2,496	3,142	3,794	82	82	81	1.15	1.20	1.30
Potted, Seed 2/	Pots	838	791	998	97	94	92	.70	.77	.92
Hanging Baskets:										
Foliage	Baskets	905	694	753	96	93	93	3.97	3.47	3.64
Flowering	Baskets	3,408	4,027	4,403	90	87	84	9.85	9.09	9.27
Bedding Plants:										
Other Flowering and Foliage Type	Flats	4,549	6,757	7,982	81	86	82	6.48	6.73	7.37
Other Flowering and Foliage Type 2/	Pots	5,300	7,457	8,470	94	94	93	.64	.60	.61
Vegetable Type 3/	Flats	727	875	1,241	84	81	70	6.67	6.53	7.52
Vegetable Type 2/ 3/	Pots	500	841	898	73	88	87	.50	.64	.66
Easter Lilies	Pots	459	439	416	92	93	91	3.99	3.99	3.75
Poinsettias 2/	Pots	3,996	4,433	4,723	92	93	93	4.03	3.89	3.96

1/ Equivalent wholesale value of all sales.
2/ Wholesale price is weighted average value of pots less than 5 inches and pots greater than 5 inches
3/ Does not include vegetable transplants grown for use in commercial vegetable production.
- Data not collected.

Usual Planting and Harvesting Dates, Washington

Crop	Usual Planting Dates	Usual Harvesting Dates		
		Begin	Most Active	End
Fall Barley	Sep 1-Nov 10	Jul 5	Jul 15-Aug 10	Aug 20
Spring Barley	Mar 1-May 15	Jul 15	Jul 25-Aug 25	Sep 15
Dry Beans	May 1-Jun 10	Aug 20	Sep 5-Sep 30	Nov 1
Lentils	Apr 10-May 10	Jul 15	Jul 25-Aug 25	Sep 1
Dry Peas	Apr 5-May 1	Jul 15	Jul 25-Aug 25	Sep 1
Grain Corn	Apr 5-May 20	Oct 15	Oct 25-Nov 20	Dec 15
Silage Corn	Apr 5-May 20	Sep 1	Sep 5-Oct 5	Oct 15
Alfalfa Hay		May 25		Oct 15
Other Hay		May 25		Sep 15
Oats	Mar 10-Apr 10	Jul 15	Aug 1-Aug 25	Sep 10
Winter Wheat	Aug 15-Nov 20	Jul 10	Jul 25-Aug 25	Sep 20
Spring Wheat	Mar 1-May 15	Jul 15	Jul 25-Aug 20	Sep 30
Asparagus (F)		Apr 10	May 5-Jun 5	Jun 21
Snap Beans (P)	May 10-Jun 21	Jul 20	Aug 5-Sep 1	Oct 1
Carrots (F)	Apr 15-Jul 30	Jul 30	Sep 1-Nov 1	Dec 31
Carrots (P)	Apr 15-Jul 30	Jul 30	Sep 1-Nov 1	Dec 31
Sweet Corn (F)	Apr 15-Jun 5	Jul 25	Aug 1-Sep 20	Sep 30
Sweet Corn (P)	Apr 10-Jun 25	Aug 20	Sep 1-Oct 5	Oct 20
Lettuce (F)	Mar 24-Aug 15	Jun 25	Sep 10-Nov 1	Nov 15
Onions	Transplant:			
Non-storage--Fall	Oct 15-Dec 10	Jul 5	Jul 20-Aug 5	Aug 15
--Spring	Mar 20-Apr 5	Jun 20	Jul 5-Aug 1	Sep 1
Storage	Mar 25-Apr 15	Sep 10	Sep 15-Oct 5	Oct 20
Green Peas (P)	Apr 1-Jun 20	Jun 15	Jun 25-Aug 15	Aug 31

Crop	Usual Dates of Full Bloom	Usual Harvesting Dates		
		Begin	Most Active	End
Cultivated Blackberries	Jun 15-Jul 10	Jul 10	Aug 15-Sep 20	Oct 10
Blueberries	May 10-May 15	Jul 5	Aug 5-Sep 15	Oct 5
Cranberries	Jun 10-Jun 15	Oct 1	Oct 5-Oct 10	Nov 1
Currants	Apr 1-Apr 5	Jul 5	Jul 10-Jul 20	Jul 25
Raspberries	May 10-May 15	Jun 25	Jul 15-Jul 20	Aug 15
Strawberries	Apr 10-May 15	Jun 10	Jun 25-Jul 5	Jul 20
Apples	Apr 5-May 10	Aug 10	Sep 5-Oct 25	Nov 1
Apricots	Mar 20-Apr 5	Jun 25	Jul 5-Jul 25	Aug 1
Sweet Cherries	Apr 10-Apr 25	Jun 10	Jun 15-Jul 15	Jul 20
Grapes	May 25-Jul 10	Sep 15	Sep 15-Oct 20	Oct 20
Peaches	Apr 10-Apr 20	Jul 10	Aug 10-Sep 10	Sep 20
Bartlett Pears	Apr 5-May 5	Aug 10	Aug 15-Sep 10	Sep 20
Other Pears	Apr 5-May 5	Sep 5	Sep 20-Oct 20	Nov 1
Prunes	Apr 15-Apr 20	Aug 10	Aug 20-Sep 5	Oct 1

(F)=Fresh market
(P)=Processing market

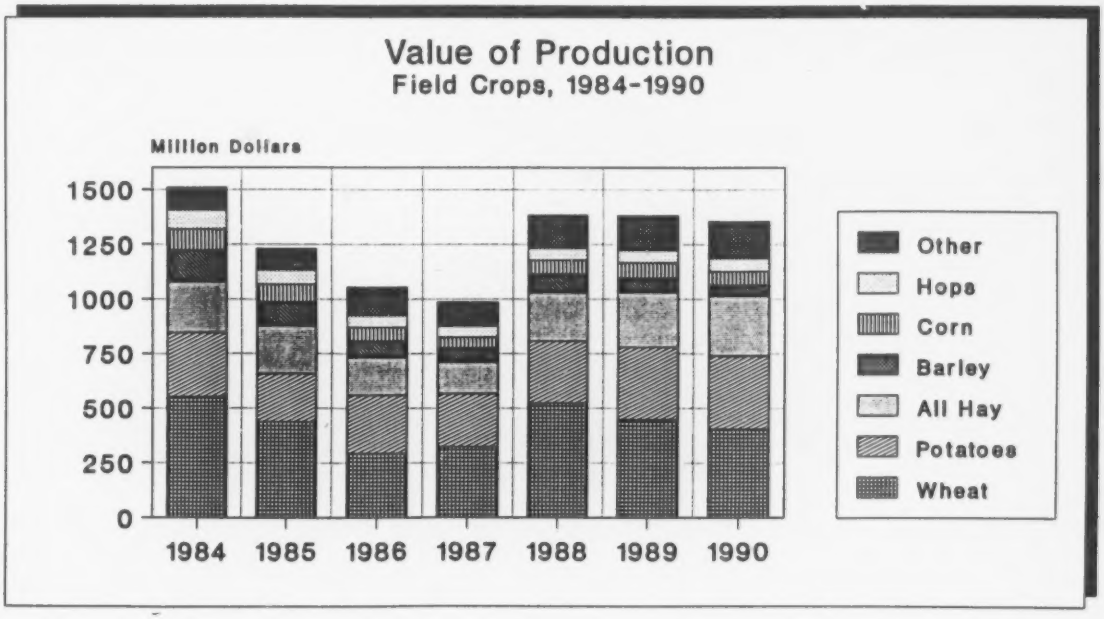
FIELD CROPS

The soil moisture condition for fall seeding was short for most regions of the State. Seeding of fall crops had started the end of August with about 5 percent completed at this time. By September 11, 20 percent of the cropland had been harvested. Farmers were delaying planting until temperatures cooled, reducing Russian wheat aphid populations. By September 25, winter wheat was 48 percent planted and 26 percent emerged, down 4 points from last year and 8 points from the five-year average. Dry moisture and the Russian wheat aphid were inhibiting factors delaying the seeding of winter wheat. Finally, by November 6, about 99 percent of the winter wheat was planted and about 95 percent emerged, up 1 point from the five-year average. Soil moisture this time was adequate to good.

As December arrived, colder weather spread throughout the area of the State. Relatively mild to normal temperatures were recorded throughout the month. At this time, the wheat that had emerged looked very good. Rain and snow mixtures were common in the later parts of December across the State. January brought above-average temperatures and moisture getting the wheat an early growing start. The wheat made it through the winter months in good shape.

As April arrived, so did Spring work. By April 9, 70 percent of the spring crops were planted and 40 percent emerged, up 25 points from the 5-year average and 33 points up from last year. Fieldwork was above average due to the favorable early April weather. By April 23, 90 percent of the spring wheat was planted and 82 percent of the spring barley was planted, up 20 points from last year's estimates. Potatoes were 60 percent planted and 20 percent emerged at this time.

In the second week of May, winter wheat began to head out. Green chop and silage were cut in several western counties. The alfalfa hay first cutting was 15 percent completed by May 21. Barley was 100 percent planted. Crops were growing slowly due to the cool moist weather across the State. In the first week of June, crops were damaged due to hail and rain. Overall, all crops were good to excellent at this point. The beginning of July brought change as the wheat was beginning to change color. At this time, 16 percent of the second alfalfa cutting was complete. By the 16th, 2 percent of the winter wheat seeding was complete, down three points from the five-year average. By the end of August, some areas in the eastern regions reported sprout damage; 94 percent of the wheat was harvested. About 55 percent of the third cutting of alfalfa was completed, and both potato harvest and corn harvest were underway. Fall ground was tilled for the preparation of seeding winter crops in some areas.



Field Crop Acreage, Production, Price and Value

Crop and Year	Acreage		Yield Per Acre	Unit	Production	Average Price Per Unit	Value of Production
	Planted	Harvested					
	1,000 Acres				1,000 Units	Dollars	1,000 Dollars
Wheat, Winter							
1986	2,250	2,100	49.0	Bu.	102,900	-	-
1987	1,900	1,825	57.0	Bu.	104,025	-	-
1988	1,850	1,750	62.0	Bu.	108,500	-	-
1989	2,100	1,300	53.0	Bu.	68,900	-	-
1990	2,300	2,200	63.0	Bu.	138,600	-	-
Wheat, Spring							
1986	320	310	45.0	Bu.	13,950	-	-
1987	200	190	54.0	Bu.	10,260	-	-
1988	320	310	52.0	Bu.	16,120	-	-
1989	1,000	970	43.0	Bu.	41,710	-	-
1990	300	280	41.0	Bu.	11,480	-	-
Wheat, All							
1986	2,570	2,410	48.5	Bu.	116,850	2.51	293,294
1987	2,100	2,015	56.7	Bu.	114,285	2.82	322,284
1988	2,170	2,060	60.5	Bu.	124,620	4.19	522,158
1989	3,100	2,270	48.7	Bu.	110,610	4.04	446,864
1990	2,600	2,480	60.5	Bu.	150,080	2.70	405,216
Barley							
1986	920	900	50.0	Bu.	45,000	1.67	75,150
1987	660	645	55.0	Bu.	35,475	1.87	66,338
1988	580	560	62.0	Bu.	34,720	2.45	85,064
1989	500	490	58.0	Bu.	28,420	2.29	65,082
1990	400	390	58.0	Bu.	22,620	2.15	48,633
Oats							
1986	70	33	65.0	Bu.	2,145	1.10	2,360
1987	75	30	66.0	Bu.	1,980	1.40	2,772
1988	80	35	67.0	Bu.	2,345	2.05	4,807
1989	85	45	63.0	Bu.	2,835	1.35	3,827
1990	80	40	66.0	Bu.	2,640	1.20	3,168
Corn for Grain 1/							
1986	170	120	170.0	Bu.	20,400	1.80	36,720
1987	120	80	170.0	Bu.	13,600	2.15	29,240
1988	120	80	170.0	Bu.	13,600	3.00	40,800
1989	130	90	175.0	Bu.	15,750	2.85	44,888
1990	120	80	175.0	Bu.	14,000	2.75	38,500
Corn for Silage							
1986	-	50	24.0	Tons	1,200	22.50	27,000
1987	-	40	25.0	Tons	1,000	22.00	22,000
1988	-	40	25.0	Tons	1,000	24.00	24,000
1989	-	40	25.0	Tons	1,000	25.00	25,000
1990	-	40	23.0	Tons	920	27.00	24,840
Dry Beans							
1986	32	31	21.6	Cwt.	670	17.80	11,926
1987	36	35	21.3	Cwt.	746	15.40	11,488
1988	37	36	20.6	Cwt.	742	28.10	20,850
1989	44	43	21.6	Cwt.	929	25.80	23,968
1990	48	47	19.4	Cwt.	912	20.70	18,878
Dry Edible Peas							
1986	110.0	109.0	18.4	Cwt.	2,006	9.00	18,054
1987	107.0	106.0	20.0	Cwt.	2,120	7.60	16,112
1988	117.0	116.0	21.4	Cwt.	2,482	8.70	21,593
1989	115.0	114.0	21.8	Cwt.	2,485	9.00	22,365
1990	108.0	104.0	15.4	Cwt.	1,602	10.90	17,462
Lentils							
1986	113.0	112.0	12.2	Cwt.	1,366	19.50	26,637
1987	98.0	97.0	12.0	Cwt.	1,164	11.00	12,804
1988	49.0	48.0	12.4	Cwt.	595	16.90	10,056
1989	55.0	54.0	12.0	Cwt.	648	18.00	11,664
1990	65.0	64.0	9.3	Cwt.	595	17.80	10,591

Field Crop Acreage, Production, Price, and Value (continued)

Crop and Year	Acreage		Yield Per Acre	Unit	Production	Average Price Per Unit	Value of Production
	Planted	Harvested					
	1,000 Acres				1,000 Units	Dollars	1,000 Dollars
Potatoes							
1986	119	118	525	Cwt.	61,950	4.30	266,385
1987	124	124	540	Cwt.	66,960	3.65	244,404
1988	115	115	550	Cwt.	63,250	4.50	284,625
1989	118	118	545	Cwt.	64,310	5.15	331,197
1990	133	132	515	Cwt.	67,980	4.90	333,102
Hops							
1986	-	17.4	2,040	Lbs.	35,496	1.59	56,439
1987	-	20.1	1,860	Lbs.	37,398	1.32	49,365
1988	-	23.1	1,721	Lbs.	39,751	1.36	54,061
1989	-	24.3	1,782	Lbs.	43,377	1.33	57,691
1990	-	25.7	1,634	Lbs.	41,942	1.44	60,396
Alfalfa Hay							
1986	-	470	4.2	Tons	1,974	-	-
1987	-	460	4.3	Tons	1,978	-	-
1988	-	490	4.2	Tons	2,058	-	-
1989	-	480	4.3	Tons	2,064	-	-
1990	-	470	4.8	Tons	2,256	-	-
Other Hay							
1986	-	340	2.5	Tons	850	-	-
1987	-	270	2.4	Tons	648	-	-
1988	-	310	2.5	Tons	775	-	-
1989	-	300	2.5	Tons	750	-	-
1990	-	320	2.5	Tons	800	-	-
All Hay							
1986	-	810	3.49	Tons	2,824	60.00	172,440
1987	-	730	3.60	Tons	2,626	54.50	143,117
1988	-	800	3.54	Tons	2,833	78.50	222,391
1989	-	780	3.61	Tons	2,814	89.50	251,853
1990	-	790	3.87	Tons	3,056	90.50	276,568
Peppermint							
1986	-	10.9	89	Lbs.	970	8.35	8,100
1987	-	11.5	87	Lbs.	1,001	10.40	10,410
1988	-	16.5	86	Lbs.	1,419	14.30	20,292
1989	-	17.3	91	Lbs.	1,574	11.20	17,629
1990	-	18.1	93	Lbs.	1,683	11.90	20,028
Spearmint							
1986	-	13.0	143	Lbs.	1,859	10.70	19,891
1987	-	10.2	138	Lbs.	1,408	11.40	16,051
1988	-	9.7	130	Lbs.	1,261	11.70	14,754
1989	-	10.6	104	Lbs.	1,102	12.60	13,885
1990	-	14.7	114	Lbs.	1,676	13.00	21,788
Rapeseed							
1986	15	14	1,700	Lbs.	23,800	.075	1,785
1987	15	13	1,385	Lbs.	18,000	.075	1,350
Other Crops							
1986	-	130	-	-	-	-	38,400
1987	-	161	-	-	-	-	39,780
1988 2/	-	219	-	-	-	-	58,575
1989 2/	-	230	-	-	-	-	69,604
1990 2/	-	275					75,118
State Total 3/							
1986	5,100.3	4,878.3	-	-	-	-	1,054,581
1987	4,267.8	4,117.8	-	-	-	-	987,515
1988	4,336.3	4,158.3	-	-	-	-	1,384,026
1989	5,209.2	4,326.2	-	-	-	-	1,385,517
1990	4,677.5	4,500.5					1,354,288

1/ Corn planted acres is "Planted for Grain and Silage".
2/ Other crops includes rapeseed grass silage, buckwheat, triticale, and other minor crops.
3/ Planted acres for State total includes harvested acreage for hops, hay, mint, dry edible peas, lentils, and other crops.

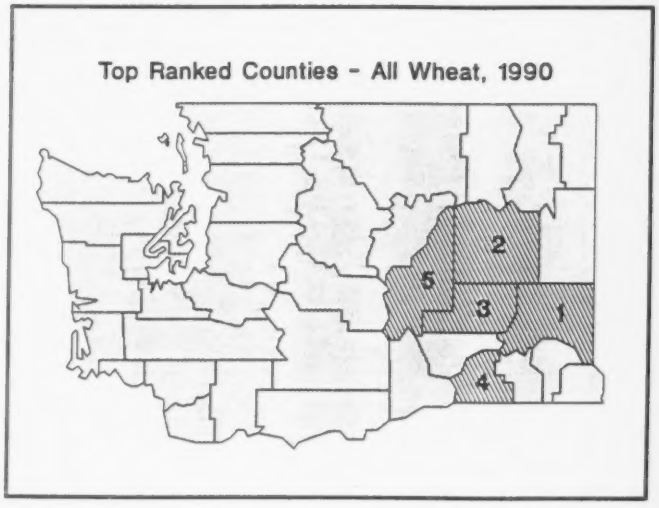
ALL WHEAT

The all wheat production returned to a more normal level for 1990 compared with the decimated crop of 1989. Production was 150 million bushels, an increase of 36 percent from the previous year, but the price of wheat fell dramatically. The season average price of wheat was $2.70, off one-third from the previous year bringing the total value of production to $405 million, 9 percent below the 1989 level.

The quantity of grain stored in Washington was consistent with the previous two years, but much below the early 1980's. The quantity of grain stored on farms for June 1, 1990 was 8 million bushels, the lowest level for June 1 since 1981. The combined stocks of the farm plus commercial storages totaled 52.4 million bushels on June 1, slightly more than the previous two years, but only about half of the mid-1980's level.

Acreage, Production, and Price

Year	Acres Harvested	Yield Per Acre	Production	Season Avg. Price
	1,000	Bushels	1,000 Bushels	$/Bu.
1981	3,050	55.2	168,350	3.92
1982	2,840	48.9	138,880	4.01
1983	2,690	64.2	172,570	3.68
1984	2,610	61.4	160,350	3.45
1985	2,690	47.7	128,250	3.41
1986	2,410	48.5	116,850	2.51
1987	2,015	56.7	114,285	2.82
1988	2,060	60.5	124,620	4.19
1989	2,270	48.7	110,610	4.04
1990	2,480	60.5	150,080	2.70



All Wheat Stocks

Crop Year	September 1 On-Farm	September 1 Off-Farm	September 1 Total	December 1 On-Farm	December 1 Off-Farm	December 1 Total	March 1* On-Farm	March 1* Off-Farm	March 1* Total	June 1* On-Farm	June 1* Off-Farm	June 1* Total
	1,000 Bushels											
1981 1/	42,088	124,768	166,856	30,303	94,107	124,410	21,886	67,505	89,391	16,835	47,425	64,260
1982 1/	44,442	124,614	169,056	31,942	102,873	134,815	26,387	77,856	104,243	20,832	64,282	85,114
1983 1/	58,674	154,214	212,888	50,045	113,621	163,666	32,788	90,253	123,041	22,434	76,454	98,888
1984 1/	52,916	147,996	200,912	40,088	116,865	156,953	28,863	93,006	121,869	22,449	85,775	108,224
1985 1/	43,605	158,583	202,188	38,475	132,436	170,911	29,498	111,776	141,274	25,650	102,031	127,681
1986	65,089	159,588	224,677	41,000	135,518	176,518	28,000	113,021	141,021	19,000	97,511	116,511
1987	45,000	167,699	212,699	35,000	136,895	171,895	30,000	106,830	136,830	17,000	75,339	92,339
1988	40,000	130,930	170,930	32,000	87,913	119,913	21,000	55,130	76,130	12,000	38,191	50,191
1989	39,000	97,613	136,613	27,000	84,988	111,988	18,000	60,557	78,557	12,000	38,588	50,588
1990	40,000	125,129	165,129	27,000	98,422	125,422	18,000	64,808	82,808	8,000	44,380	52,380

1/ Survey dates October 1, January 1, and April 1.
* Following year.

All Wheat By County

County and District	1989				1990			
	Acreage		Yield Per Acre	Production	Acreage		Yield Per Acre	Production
	Planted	Harvested			Planted	Harvested		
	Acres		Bushels	Bushels	Acres		Bushels	Bushels
West								
Clark	500	500	84.0	42,000	400	400	70.0	28,000
Island	500	500	80.0	40,000	500	500	64.0	32,000
Lewis	700	700	80.0	56,000	700	600	66.7	40,000
Skagit	3,600	3,400	82.4	280,000	2,500	2,100	73.8	155,000
Snohomish	1,100	1,000	60.0	60,000	1,100	1,000	62.0	62,000
Whatcom	1,000	800	67.5	54,000	1,700	800	60.0	48,000
Other Co.	600	600	50.0	30,000	600	600	51.7	31,000
Total	**8,000**	**7,500**	**74.9**	**562,000**	**7,500**	**6,000**	**66.0**	**396,000**
Central								
Benton	186,000	145,000	28.2	4,093,000	136,900	125,700	32.9	4,139,000
Chelan	2,400	2,300	27.4	63,000	2,000	1,800	26.7	48,000
Kittitas	5,700	5,700	76.1	434,000	7,000	6,700	76.7	514,000
Klickitat	56,700	53,000	37.5	1,989,000	45,500	42,700	43.0	1,835,000
Okanogan	13,200	10,500	27.6	290,000	8,100	7,300	41.4	302,000
Yakima	39,000	38,000	69.5	2,641,000	29,500	26,800	69.8	1,871,000
Total	**303,000**	**254,500**	**37.4**	**9,510,000**	**229,000**	**211,000**	**41.3**	**8,709,000**
Northeast								
Ferry	1,100	1,000	43.0	43,000	700	700	40.0	28,000
Spokane	166,800	126,000	53.6	6,757,000	115,300	110,600	72.4	8,004,000
Stevens	17,100	13,000	46.9	610,000	12,300	11,500	66.1	749,000
Other Co.	-	-	-	-	200	200	60.0	12,000
Total	**185,000**	**140,000**	**52.9**	**7,410,000**	**128,500**	**123,000**	**71.5**	**8,793,000**
East Central								
Adams	516,000	321,000	43.6	13,990,000	339,000	336,500	53.0	17,319,000
Douglas	211,500	170,000	27.1	4,605,000	189,000	179,000	37.5	6,719,000
Franklin	134,000	98,000	52.5	5,143,000	123,000	114,700	56.9	6,523,000
Grant	216,500	173,000	64.2	11,110,000	243,000	231,200	61.5	14,211,000
Lincoln	563,000	325,000	42.9	13,935,000	396,000	379,600	57.1	21,663,000
Total	**1,641,000**	**1,087,000**	**44.9**	**48,783,000**	**1,290,000**	**1,231,000**	**54.0**	**66,435,000**
Southeast								
Asotin	25,500	25,000	46.8	1,171,000	29,500	28,400	62.7	1,781,000
Columbia	81,700	80,500	59.9	4,824,000	96,000	92,700	70.3	6,513,000
Garfield	79,800	75,000	55.7	4,180,000	83,000	79,600	65.4	5,203,000
Walla Walla	216,000	200,000	52.3	10,465,000	257,500	247,200	66.6	16,464,000
Whitman	560,000	400,500	59.2	23,705,000	479,000	461,100	77.6	35,786,000
Total	**963,000**	**781,000**	**56.8**	**44,345,000**	**945,000**	**909,000**	**72.3**	**65,747,000**
State Total	**3,100,000**	**2,270,000**	**48.7**	**110,610,000**	**2,600,000**	**2,480,000**	**60.5**	**150,080,000**

- Not Applicable.

Winter Wheat

Winter wheat acreage seeded for harvest in 1990 was 2.3 million acres, the highest level since 1985 and 10 percent above the 1989 acreage. Above normal temperatures during early spring pushed the progress of the crop ahead of normal. By May 14, 8 percent of the crop was headed compared with 3 percent on the same date during the previous year and a 5-year average of 1 percent. Soil moisture conditions across the State were reported to be short until a cool, wet weather pattern arrived during early May and continued until mid-June. During this time, soil moisture conditions improved in many areas; however, several east-central counties continued to report soil moisture shortages. With the arrival of the cooler, wet weather, some producers experienced problems with stripe rust, leaf rust, and powdery mildew. Russian wheat aphids were also a problem for producers this year, and many producers sprayed to control populations. Hot, dry weather during early summer resulted in a rapid progress of harvest across the state, but progress in later areas was hampered by rain during the latter part of August. By September 2, 97 percent of the crop had been harvested compared with 100 percent in 1989 and a five-year average of 99 percent.

Harvested acreage in 1990 was 2.2 million acres, an increase of 900,000 acres above the 1989 freeze-damaged crop. The average yield per acre was up 10 bushels from 1989 to 63 bushels.

Acreage, Yield, and Production

Year	Acres Harvested	Yield Per Acre	Production
	1,000	Bushels	1,000 Bushels
1981	2,830	57	161,310
1982	2,560	49	125,440
1983	2,500	65	162,500
1984	2,400	62	148,800
1985	2,400	48	115,200
1986	2,100	49	102,900
1987	1,825	57	104,025
1988	1,750	62	108,500
1989	1,300	53	68,900
1990	2,200	63	138,600

Spring Wheat

Spring wheat acreage returned to a more normal level for 1990 at 300,000 acres planted compared with the 1989 crop of 1 million acres planted. Devastating cold temperatures destroyed much of the winter wheat for 1989 which was reseeded to spring varieties.

Seeding spring wheat began nearly 2 weeks ahead of normal in most areas of the State. Abnormally dry winter and early spring conditions were a major concern among producers, and seeding and fertilizer rates were reduced by some dryland producers. Precipitation was received at the end of April, and at times through mid-May; however, central areas still remained below normal for the season. The last two weeks of May were abnormally cool and wet in eastern counties.

Hot weather during mid-July were damaging to the spring wheat. Yield prospects declined, and ended at an average yield of 41 bushels per acre, down 2 bushels from 1989 and 11 bushels below the 1988 yield. Total production from the smaller acreage and lower yields was 11.5 million bushels compared with 41.7 million bushels for the 1989 crop and 16.1 milion bushels for 1988.

Acreage, Yield, and Production

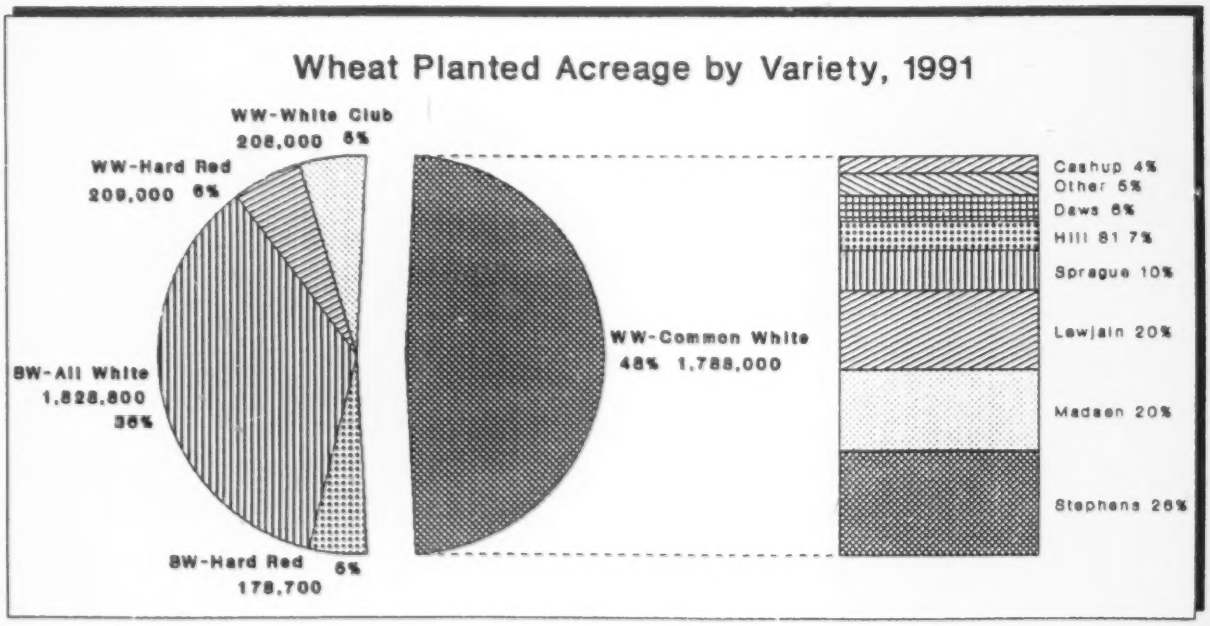
Year	Acres Harvested	Yield Per Acre	Production
	1,000	Bushels	1,000 Bushels
1981	220	32	7,040
1982	280	48	13,440
1983	190	53	10,070
1984	210	55	11,550
1985	290	45	13,050
1986	310	45	13,950
1987	190	54	10,260
1988	310	52	16,120
1989	970	43	41,710
1990	280	41	11,480

WHEAT VARIETY SURVEY-1991 CROP

The total acreage planted to winter wheat for the 1991 crop is 2.2 million acres, a decrease of 4 percent from the 1990 crop of 2.3 million acres. The arctic cold temperatures were devastating to the crop, and only 750,000 acres will be harvested for grain. The situation for the 1991 crop is similar to 1989 when 2.1 million acres were planted and only 1.3 million acres were harvested for grain. A high percentage of the winter-killed acreage was reseeded to spring wheat and barley. Spring wheat acreage planted for 1991 totaled 1.5 million acres, five times the acreage of 1990 at 300,000 acres planted. Barley acreage planted also showed an increase at 580,000 acres planted compared with 400,000 acres planted in 1990.

Common White winter wheat is the most popular class grown in the State. There were 1.79 million acres planted for 1991, down 33,000 acres from 1990. Stephens is the top variety with 448,900 acres planted or 25 percent of the white common class. Following Stephens are Lewjain with 346,400 acres and Madsen with 332,500 acres. Hard Red, the second most popular class of wheat, increased from 198,000 acres planted in 1990 to 209,000 acres planted this year. Weston and Hatton are the two popular varieties with 48 percent and 29 percent of the Hard Red class respectively. White club acreage declined from 281,000 to 203,000 acres, a 28 percent decrease in that class. Hyak is the dominant variety in this class.

Spring wheat acreage is five times greater this year than in 1990. For 1991, 1.5 million acres were planted. Soft white account for 88 percent of the spring wheat total. Penewawa leads this class with 803,800 acres, up from the 1990 crop of 99,100 acres. Edwall follows Penewawa with 273,000 acres planted or 21 percent of the soft white class of wheat. Wampum dominates the Hard Red class with 39,900 acres or 22.5 percent of the Hard Red class. Hard white spring wheat was reported as a significant group and is estimated at 4,000 acres planted for 1991. Klassic is the only specific variety that was reported on the survey and is estimated to be planted on 2,700 acres.



WHEAT AND BARLEY VARIETY SURVEY PROCEDURES 1991 CROP

The Wheat and Barley Variety Survey involved a nonprobability sample of approximately 3,000 wheat and barley producers in the State. The data from this survey along with the data from the June Agricultural Survey were used to set the State's total acreage planted for the 1991 winter and spring wheat crop. Questionnaires were mailed in late April and returned from May to July. Personal interviews and telephone follow-up of non-response operations were completed by late June.

There were 2,857 questionnaires tabulated this year. Winter wheat reported as raw data amounted to 1,167,499 acres or 53 percent of the 2.2 million acres planted for 1991. Spring wheat reported in this survey was 800,109 acres or 53 percent of the estimated 1.5 million acres planted to spring wheat.

The spring wheat planted acreage for 1991 is the second highest in history. Estimated acres of 1.5 million are just shy of the record set back in 1937 at 1.7 million acres planted and it is five times higher than last year's estimate of 300,000 acres. The northeast and the east central regions of the State had the most winter damage on cropland planted. In the northeast region, 30 percent of the fall cropland will be harvested; and in the east central region, 19 percent will be harvested from the original acreage planted in the fall of 1990.

Reseeding this spring was done in January through late April. This year cold weather, wind damage, very little snow cover, and very low moisture levels were responsible for farmers reseeding over 700,000 acres. Farmers tried to replant winter wheat again in early spring hoping to get the high yield of a winter crop. Most areas lost their second seeding of winter wheat. Other operations planted spring wheat. If the spring crop was planted around February or early March, it was met by yet another cold spell killing off a large percentage.

The extent of the damage to the winter wheat crop was extensive. Many producers experienced 100 percent losses. For these fields, the entire field was either reworked and sown to a spring crop, or seeded directly without working the seedbed. Some areas had spotty stands of winter wheat left that may have been plowed out in preparing the seedbed for the spring crops, or left if the acreage was significant. Producers that had some damage, but elected to leave the winter wheat that survived and overseed with spring wheat had a difficult time reporting the acreage, especially when they had to report the variety of the stand. For most of these situations, the field was classified as the spring variety.

THESE DATA DO NOT INDICATE WINTER HARDINESS, BUT DO INDICATE THE SURVIVAL RATES OF THE VARIETIES THAT PRODUCERS REPORTED ON THIS SURVEY. Two factors that must be considered in reviewing these data: (1) this is survey data, and (2) small acreages may not be accurately reported by this sample. This is the only survey that is planned for wheat by class for this year except for an estimate of total white wheat production at the end of the year which will be released in January of 1992.

SURVIVAL RATE OF WINTER WHEAT (HARVESTED/PLANTED = H/P%)

Common White		White Club	
Stephens-Daws	88%	Jacmar	100%
Dusty	75%	Tyee	69%
Yamhill	68%	Crew	61%
Gaines/Nugaines	53%	Paha	35%
Stephens	43%	Hyak	23%
Malcolm	42%	Tres	16%
Cashup	41%	Moro	8%
Hill 81	35%		
Hill 81-Malcolm	33%	**Hard Red**	
Daws	37%		
John	30%	Bounty	100%
Daws-Hill 81	30%	Victory	100%
Sprague	22%	Weston	60%
Lewjain	15%	Andrews	40%
Daws-John	10%	Wanser	37%
Malcolm-Madsen	5%	Winridge	35%
		Hatton	34%

1991 ACREAGE HARVESTED TO PLANTED PERCENTAGES FOR WINTER WHEAT

District	Common White			White Club		
	Planted Acres	Harvested Acres	% H/P	Planted Acres	Harvested Acres	% H/P
West	4,900	2,900	59%	0	0	0%
Central	92,000	54,200	59%	8,700	4,500	52%
Northeast	104,000	30,700	30%	1,000	300	30%
East Central	805,400	152,900	19%	188,500	29,500	16%
Southeast	781,700	374,300	48%	4,800	2,700	56%
State Total	1,788,000	615,000	34%	203,000	37,000	18%

District	Hard Red			State Total		
	Planted Acres	Harvested Acres	% H/P	Planted Acres	Harvested Acres	% H/P
West	100	100	100%	5,000	3,000	60%
Central	89,300	67,300	75%	190,000	126,000	66%
Northeast	0	0	0%	105,000	31,000	30%
East Central	116,100	27,600	24%	1,110,000	210,000	19%
Southeast	3,500	3,000	86%	790,000	380,000	48%
State Total	209,000	98,000	47%	2,200,000	750,000	34%

1991 ACRES PLANTED BY VARIETY, BY AGRICULTURAL STATISTICS DISTRICTS 1/, WASHINGTON

CLASS/VARIETY	WEST	CENTRAL	NORTHEAST	E.CENTRAL	SOUTHEAST	1991 STATE	1990 STATE
WINTER WHEAT				ACRES			
COMMON WHITE:							
STEPHENS	2,900	56,300	-	120,400	266,500	448,900	518,700
LEWJAIN	-	3,000	8,800	328,800	5,800	346,400	363,200
MADSEN	-	4,700	30,500	60,000	228,300	332,500	91,300
HILL 81	-	5,500	35,000	23,200	108,000	171,900	279,700
SPRAGUE	-	-	-	114,600	-	123,700	133,300
DAWS	-	-	12,000	53,200	43,500	109,300	136,900
MALCOM	-	6,400	-	30,000	50,700	89,300	68,600
CASHUP	700	-	-	21,900	49,800	72,700	127,900
JOHN	-	-	-	16,500	-	19,600	20,200
STEPHENS-HILL 81	-	-	-	-	7,400	7,400	8,500
GAINES & NUGAINES	-	-	400	5,000	-	6,200	7,300
JOHN-DUSTY-LEWJAIN*	-	-	-	-	-	4,200	NA
MALCOLM-MADSEN*	-	-	-	2,100	-	3,800	NA
DAWS-LEWJAIN*	-	-	-	2,300	-	3,400	2,500
BASIN	-	-	-	2,300	800	3,300	5,900
DUSTY	-	-	400	-	-	2,300	5,000
OTHER COMMON	1,200	12,700	6,400	20,200	19,800	60,300	79,200
UNKNOWN COMMON	100	3,400	1,500	4,900	1,100	11,000	2,800
TOTAL	**4,900**	**92,000**	**104,000**	**805,400**	**781,700**	**1,788,000**	**1,821,000**
WHITE CLUB:							
HYAK	-	2,800	-	67,500	3,100	73,900	46,600
MORO	-	-	-	69,000	-	70,900	91,900
TRES	-	-	-	43,500	1,000	45,900	123,600
TYEE	-	-	-	-	-	3,500	8,100
CREW	-	300	-	2,500	-	2,800	6,600
OTHER CLUB	-	5,500	800	5,000	700	4,700	100
UNKNOWN CLUB	-	100	200	1,000	-	1,300	4,100
TOTAL	**0**	**8,700**	**1,000**	**188,500**	**4,800**	**203,000**	**281,000**
HARD RED:							
WESTON	-	65,600	-	34,000	-	99,600	80,800
HATTON	-	12,100	-	47,000	2,200	61,300	87,300
WANSER	-	11,500	-	22,000	-	33,500	18,600
VICTORY	-	-	-	-	-	1,000	3,100
BATUM	-	-	-	-	-	1,000	NA
OTHER HARD RED	-	-	-	10,800	1,300	10,100	7,400
UNKNOWN HARD RED	100	100	-	2,300	-	2,500	300
TOTAL	**100**	**89,300**	**0**	**116,100**	**3,500**	**209,000**	**198,000**
TOTAL WINTER	**5,000**	**190,000**	**105,000**	**1,110,000**	**790,000**	**2,200,000**	**2,300,000**

1/ The sum of the districts may not add to the State total to avoid disclosure of individual operations.
NA Insufficient acreage planted to report.

1991 ACRES PLANTED BY VARIETY, BY AGRICULTURAL STATISTICS DISTRICTS 1/, WASHINGTON

CLASS/VARIETY	WEST	CENTRAL	NORTHEAST	E.CENTRAL	SOUTHEAST	1991 STATE	1990 STATE
SPRING WHEAT				ACRES			
SOFT WHITE:							
PENAWAWA	600	14,000	51,000	476,300	261,400	803,800	99,100
EDWALL	-	-	15,200	203,300	51,300	273,000	65,700
TREASURE	-	-	1,900	1,700	49,800	59,400	1,100
BLISS	-	-	-	27,900	-	29,400	2,500
FIELDWIN	-	19,400	-	-	-	20,800	3,800
WS-1	-	-	-	13,600	4,500	18,300	15,200
DIRKWIN	-	2,400	-	-	10,000	16,800	4,800
WAVERLY	-	-	-	10,700	2,800	15,700	8,200
URQUIE	-	-	-	12,600	-	12,600	1,400
TREASURE-PENEWAWA	-	700	-	3,900	-	11,300	NA
FIELDER	-	800	-	8,500	-	10,700	3,000
WADUAL	-	-	-	6,800	1,900	8,700	800
SPRITE	-	-	-	5,000	2,400	7,400	2,400
OWENS	-	-	-	-	4,600	7,300	2,000
MARFED	-	400	-	3,200	-	3,900	NA
WAKANZ	-	-	2,000	-	700	2,700	NA
WW PLANTED AS SW	-	-	-	2,000	-	2,000	NA
OTHER SOFT WHITE	500	6,600	1,600	12,700	10,900	8,300	2,800
UNKNOWN SOFT WHITE	-	3,200	900	2,300	800	7,200	2,200
TOTAL	**1,100**	**47,500**	**73,100**	**796,500**	**401,100**	**1,319,300**	**215,000**
HARD RED:							
WAMPUM	-	33,900	-	-	-	39,900	29,200
BUTTE 86	-	-	-	31,800	-	32,700	900
NEWANA	-	-	-	20,700	-	20,700	1,600
WESTBRED 926	-	2,000	-	9,900	8,600	20,500	9,500
YECORA ROJO	-	4,900	-	9,600	-	15,500	10,300
WESTBRED 906R	-	-	-	6,300	4,200	14,100	13,800
MCKAY	-	-	-	7,700	-	7,700	3,600
SPILLMAN	-	200	-	6,900	-	7,100	200
NOMAD	-	-	-	1,600	1,200	2,800	7,700
LAURA	-	-	-	1,200	-	1,200	NA
TAMMY	-	-	-	900	-	900	2,000
OTHER HARD RED	200	5,400	1,400	10,900	1,800	8,200	4,500
UNKNOWN HARD RED	200	100	-	3,800	1,300	5,400	2,000
TOTAL	**400**	**46,500**	**1,400**	**111,300**	**17,100**	**176,700**	**83,000**
HARD WHITE:							
KLASSIC	-	-	-	2,200	500	2,700	NA
UNKNOWN HW	-	-	-	-	1,300	1,300	NA
OTHER HW	-	-	-	-	-	0	NA
TOTAL	**0**	**0**	**0**	**2,200**	**1,800**	**4,000**	**NA**
TOTAL SPRING	**1,500**	**94,000**	**74,500**	**910,000**	**420,000**	**1,500,000**	**300,000**
TOTAL ALL WHEAT	**6,300**	**284,000**	**179,500**	**2,020,000**	**1,210,000**	**3,700,000**	**2,600,000**

1/ The sum of the districts may not add to the State total to avoid disclosure of individual operations.

NA Insufficient acreage planted to report.

Winter Wheat by County, 1989

County And District	All				Irrigated			Dryland		
	Acreage		Yld	Production	Acreage Harvested	Yld	Production	Acreage Harvested	Yld	Production
	Planted	Harvested								
	Acres		Bushels		Acres	Bushels		Acres	Bushels	
West										
Clark	500	500	84.0	42,000	-	-	-	500	84.0	42,000
Island	500	500	80.0	40,000	-	-	-	500	80.0	40,000
Lewis	700	700	80.0	56,000	-	-	-	700	80.0	56,000
Skagit	3,200	3,000	85.0	255,000	-	-	-	3,000	85.0	255,000
Snohomish	1,100	1,000	60.0	60,000	-	-	-	1,000	60.0	60,000
Whatcom	1,000	800	67.5	54,000	-	-	-	800	67.5	54,000
Total	**7,000**	**6,500**	**78.0**	**507,000**	**-**	**-**	**-**	**6,500**	**78.0**	**507,000**
Central										
Benton	106,000	67,000	32.0	2,141,000	6,000	101.0	606,000	61,000	25.2	1,535,000
Chelan	1,400	1,300	30.0	39,000	-	-	-	1,300	30.0	39,000
Kittitas	2,200	2,200	60.5	133,000	900	115.6	104,000	1,300	22.3	29,000
Klickitat	43,200	40,000	39.0	1,560,000	4,000	75.0	300,000	36,000	35.0	1,260,000
Okanogan	7,700	5,500	30.0	165,000	300	63.3	19,000	5,200	28.1	146,000
Yakima	19,500	19,000	68.0	1,292,000	9,800	106.0	1,039,000	9,200	27.5	253,000
Total	**180,000**	**135,000**	**39.5**	**5,330,000**	**21,000**	**98.5**	**2,068,000**	**114,000**	**28.6**	**3,262,000**
Northeast										
Ferry	600	500	38.0	19,000	-	-	-	500	38.0	19,000
Spokane	120,500	81,000	57.0	4,621,000	1,100	90.0	99,000	79,900	56.6	4,522,000
Stevens	11,900	8,000	52.5	420,000	400	60.0	24,000	7,600	52.1	396,000
Total	**133,000**	**89,500**	**56.5**	**5,060,000**	**1,500**	**82.0**	**123,000**	**88,000**	**56.1**	**4,937,000**
East Central										
Adams	315,000	126,000	44.5	5,610,000	26,000	91.0	2,366,000	100,000	32.4	3,244,000
Douglas	155,000	115,000	31.0	3,560,000	1,000	58.0	58,000	114,000	30.7	3,502,000
Franklin	95,000	60,000	49.0	2,938,000	19,000	100.0	1,900,000	41,000	25.3	1,038,000
Grant	150,000	108,000	65.0	7,015,000	50,000	106.0	5,299,000	58,000	29.6	1,716,000
Lincoln	335,000	105,000	48.0	5,035,000	10,000	66.0	660,000	95,000	46.1	4,375,000
Total	**1,050,000**	**514,000**	**47.0**	**24,158,000**	**106,000**	**97.0**	**10,283,000**	**408,000**	**34.0**	**13,875,000**
Southeast										
Asotin	23,500	23,000	48.0	1,105,000	-	-	-	23,000	48.0	1,105,000
Columbia	77,000	76,000	61.0	4,635,000	400	72.5	29,000	75,600	60.9	4,606,000
Garfield	74,500	70,000	57.0	3,990,000	400	65.0	26,000	69,600	57.0	3,964,000
Walla Walla	175,000	160,000	56.0	8,965,000	10,100	86.0	869,000	149,900	54.0	8,096,000
Whitman	380,000	226,000	67.0	15,150,000	600	70.0	42,000	225,400	67.0	15,108,000
Total	**730,000**	**555,000**	**61.0**	**33,845,000**	**11,500**	**84.0**	**966,000**	**543,500**	**60.5**	**32,879,000**
State Total	**2,100,000**	**1,300,000**	**53.0**	**68,900,000**	**140,000**	**96.0**	**13,440,000**	**1,160,000**	**47.8**	**55,460,000**

- Not Applicable.

Winter Wheat by County, 1990

County And District	All				Irrigated			Dryland		
	Acreage				Acreage			Acreage		
	Planted	Harvested	Yld	Production	Harvested	Yld	Production	Harvested	Yld	Production
	Acres		Bushels		Acres	Bushels		Acres	Bushels	
West										
Clallum	400	400	70.0	28,000	-	-	-	400	70.0	28,000
Island	500	500	64.0	32,000	-	-	-	500	64.0	32,000
Lewis	700	600	66.7	40,000	-	-	-	600	66.7	40,000
Skagit	2,200	1,800	77.8	140,000	-	-	-	1,800	77.8	140,000
Snohomish	500	400	80.0	32,000	-	-	-	400	80.0	32,000
Whatcom	1,700	800	60.0	48,000	-	-	-	800	60.0	48,000
Total	**6,000**	**4,500**	**71.1**	**320,000**	**-**	**-**	**-**	**4,500**	**71.1**	**320,000**
Central										
Benton	108,900	99,500	32.3	3,210,000	10,300	106.5	1,097,000	89,200	23.7	2,113,000
Chelan	1,500	1,400	28.6	40,000	-	-	-	1,400	28.6	40,000
Kittitas	2,000	1,900	56.8	108,000	900	97.8	88,000	1,000	20.0	20,000
Klickitat	38,000	36,500	43.5	1,589,000	2,500	92.0	230,000	34,000	40.0	1,359,000
Okanogan	5,600	5,200	40.0	208,000	400	65.0	26,000	4,800	37.9	182,000
Yakima	19,000	18,500	68.1	1,260,000	10,900	101.7	1,109,000	7,600	19.9	151,000
Total	**175,000**	**163,000**	**39.4**	**6,415,000**	**25,000**	**102.0**	**2,550,000**	**138,000**	**28.0**	**3,865,000**
Northeast										
Ferry	700	700	40.0	28,000	-	-	-	700	40.0	28,000
Spokane	99,000	95,000	76.1	7,229,000	2,500	90.8	227,000	92,500	75.7	7,002,000
Stevens	9,300	8,800	70.8	623,000	500	76.0	38,000	8,300	70.5	585,000
Total	**109,000**	**104,500**	**75.4**	**7,880,000**	**3,000**	**88.3**	**265,000**	**101,500**	**75.0**	**7,615,000**
East Central										
Adams	310,000	298,000	54.7	16,315,000	82,500	98.2	8,105,000	215,500	38.1	8,210,000
Douglas	170,000	162,000	39.4	6,378,000	800	72.5	58,000	161,200	39.2	6,320,000
Franklin	105,000	99,000	58.9	5,836,000	29,700	110.1	3,271,000	69,300	37.0	2,565,000
Grant	210,000	200,000	62.9	12,584,000	64,700	110.8	7,169,000	135,300	40.0	5,415,000
Lincoln	345,000	332,000	61.2	20,307,000	37,300	87.6	3,267,000	294,700	57.8	17,040,000
Total	**1,140,000**	**1,091,000**	**56.3**	**61,420,000**	**215,000**	**101.7**	**21,870,000**	**876,000**	**45.1**	**39,550,000**
Southeast										
Asotin	28,000	27,000	65.0	1,755,000	-	-	-	27,000	65.0	1,755,000
Columbia	90,000	87,000	72.6	6,318,000	300	70.0	21,000	86,700	72.6	6,297,000
Garfield	77,000	74,000	68.1	5,039,000	400	85.0	34,000	73,600	68.0	5,005,000
Walla Walla	240,000	231,000	68.4	15,798,000	14,900	85.8	1,279,000	216,100	67.2	14,519,000
Whitman	435,000	418,000	80.5	33,655,000	1,400	79.3	111,000	416,600	80.5	33,544,000
Total	**870,000**	**837,000**	**74.7**	**62,565,000**	**17,000**	**85.0**	**1,445,000**	**820,000**	**74.5**	**61,120,000**
State Total	**2,300,000**	**2,200,000**	**63.0**	**138,600,000**	**260,000**	**100.5**	**26,130,000**	**1,940,000**	**58.0**	**112,470,000**

- Not applicable.

Spring Wheat by County, 1989

County And District	All				Irrigated			Dryland		
	Acreage Planted	Acreage Harvested	Yld	Production	Acreage Harvested	Yld	Production	Acreage Harvested	Yld	Production
	Acres		Bushels		Acres	Bushels		Acres	Bushels	
West										
Skagit	400	400	62.5	25,000	-	-	-	400	62.5	25,000
Other Co.	600	600	50.0	30,000	-	-	-	600	50.0	30,000
Total	**1,000**	**1,000**	**55.0**	**55,000**	**-**	**-**	**-**	**1,000**	**55.0**	**55,000**
Central										
Benton	80,000	78,000	25.0	1,952,000	10,000	80.0	800,000	68,000	16.9	1,152,000
Chelan	1,000	1,000	24.0	24,000	-	-	-	1,000	24.0	24,000
Kittitas	3,500	3,500	86.0	301,000	3,200	91.6	293,000	300	26.7	8,000
Klickitat	13,500	13,000	33.0	429,000	1,500	80.0	120,000	11,500	26.9	309,000
Okanogan	5,500	5,000	25.0	125,000	300	43.3	13,000	4,700	23.8	112,000
Yakima	19,500	19,000	71.0	1,349,000	13,000	93.1	1,210,000	6,000	23.2	139,000
Total	**123,000**	**119,500**	**35.0**	**4,180,000**	**28,000**	**87.0**	**2,436,000**	**91,500**	**19.1**	**1,744,000**
Northeast										
Ferry	500	500	48.0	24,000	-	-	-	500	48.0	24,000
Spokane	46,300	45,000	47.5	2,136,000	2,200	76.4	168,000	42,800	46.0	1,968,000
Stevens	5,200	5,000	38.0	190,000	300	40.0	12,000	4,700	37.9	178,000
Total	**52,000**	**50,500**	**46.5**	**2,350,000**	**2,500**	**72.0**	**180,000**	**48,000**	**45.2**	**2,170,000**
East Central										
Adams	201,000	195,000	43.0	8,380,000	51,000	88.5	4,514,000	144,000	26.8	3,866,000
Douglas	56,500	55,000	19.0	1,045,000	-	-	-	55,000	19.0	1,045,000
Franklin	39,000	38,000	58.0	2,205,000	18,000	92.0	1,656,000	20,000	27.5	549,000
Grant	66,500	65,000	63.0	4,095,000	40,000	85.0	3,400,000	25,000	27.8	695,000
Lincoln	228,000	220,000	40.5	8,900,000	20,000	74.0	1,480,000	200,000	37.1	7,420,000
Total	**591,000**	**573,000**	**43.0**	**24,625,000**	**129,000**	**85.7**	**11,050,000**	**444,000**	**30.6**	**13,575,000**
Southeast										
Asotin	2,000	2,000	33.0	66,000	-	-	-	2,000	33.0	66,000
Columbia	4,700	4,500	42.0	189,000	-	-	-	4,500	42.0	189,000
Garfield	5,300	5,000	38.0	190,000	-	-	-	5,000	38.0	190,000
Walla Walla	41,000	40,000	37.5	1,500,000	4,500	67.6	304,000	35,500	33.7	1,196,000
Whitman	180,000	174,500	49.0	8,555,000	1,000	60.0	60,000	173,500	49.0	8,495,000
Total	**233,000**	**226,000**	**46.5**	**10,500,000**	**5,500**	**66.2**	**364,000**	**220,500**	**46.0**	**10,136,000**
State Total	**1,000,000**	**970,000**	**43.0**	**41,710,000**	**165,000**	**85.0**	**14,030,000**	**805,000**	**34.4**	**27,680,000**

- Not Applicable.

Spring Wheat by County, 1990

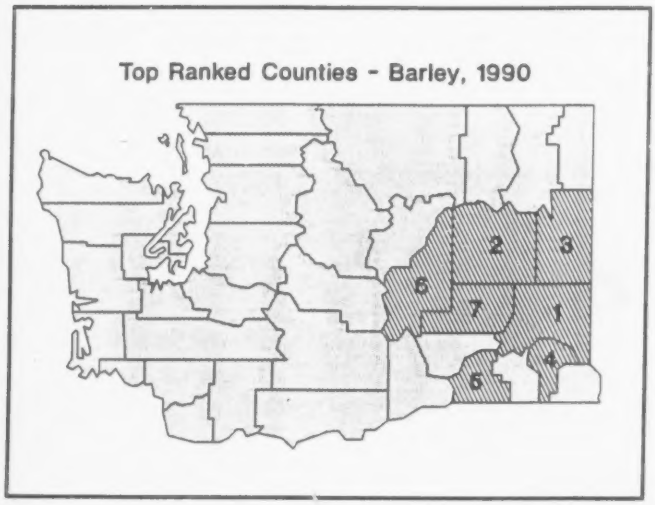
County And District	All				Irrigated			Dryland		
	Acreage				Acreage			Acreage		
	Planted	Harvested	Yld	Production	Harvested	Yld	Production	Harvested	Yld	Production
	Acres		Bushels		Acres		Bushels	Acres		Bushels
West										
Skagit	300	300	50.0	15,000	-	-	-	300	50.0	15,000
Snohomish	600	600	50.0	30,000	-	-	-	600	50.0	30,000
Other Co.	600	600	51.7	31,000	-	-	-	600	51.7	31,000
Total	**1,500**	**1,500**	**50.7**	**76,000**	**-**	**-**	**-**	**1,500**	**50.7**	**76,000**
Central										
Benton	28,000	26,200	35.5	929,000	7,300	87.1	636,000	18,900	15.5	293,000
Chelan	500	400	20.0	8,000	-	-	-	400	20.0	8,000
Kittitas	5,000	4,800	84.6	406,000	4,400	84.7	377,000	400	72.5	29,000
Klickitat	7,500	6,200	39.7	246,000	2,200	68.6	151,000	4,000	23.8	95,000
Okanogan	2,500	2,100	44.8	94,000	1,100	65.5	72,000	1,000	22.0	22,000
Yakima	10,500	8,300	73.6	611,000	7,000	84.3	590,000	1,300	16.2	21,000
Total	**54,000**	**48,000**	**47.8**	**2,294,000**	**22,000**	**83.0**	**1,826,000**	**26,000**	**18.0**	**468,000**
Northeast										
Spokane	16,300	15,600	49.7	775,000	900	66.7	60,000	14,700	48.6	715,000
Stevens	3,000	2,700	46.7	126,000	500	62.0	31,000	2,200	43.2	95,000
Other	200	200	60.0	12,000	100	60.0	6,000	100	60.0	6,000
Total	**19,500**	**18,500**	**49.4**	**913,000**	**1,500**	**64.7**	**97,000**	**17,000**	**48.0**	**816,000**
East Central										
Adams	29,000	28,500	35.2	1,004,000	7,300	78.6	574,000	21,200	20.3	430,000
Douglas	19,000	17,000	20.1	341,000	1,000	83.0	83,000	16,000	16.1	258,000
Franklin	18,000	15,700	43.8	687,000	4,900	96.1	471,000	10,800	20.0	216,000
Grant	33,000	31,200	52.1	1,627,000	13,400	92.8	1,244,000	17,800	21.5	383,000
Lincoln	51,000	47,600	28.5	1,356,000	3,900	70.3	274,000	43,700	24.8	1,082,000
Total	**150,000**	**140,000**	**35.8**	**5,015,000**	**30,500**	**86.8**	**2,646,000**	**109,500**	**21.6**	**2,369,000**
Southeast										
Asotin	1,500	1,400	18.6	26,000	-	-	-	1,400	18.6	26,000
Columbia	6,000	5,700	34.2	195,000	-	-	-	5,700	34.2	195,000
Garfield	6,000	5,600	29.3	164,000	-	-	-	5,600	29.3	164,000
Walla Walla	17,500	16,200	41.1	666,000	3,000	73.0	219,000	12,800	34.9	447,000
Whitman	44,000	43,100	49.4	2,131,000	-	-	-	43,500	49.0	2,131,000
Total	**275,000**	**72,000**	**44.2**	**3,182,000**	**3,000**	**73.0**	**219,000**	**69,000**	**42.9**	**2,963,000**
State Total	**300,000**	**280,000**	**41.0**	**11,480,000**	**57,000**	**84.0**	**4,788,000**	**223,000**	**30.0**	**6,692,000**

- Not Applicable.

BARLEY

Acreage planted to barley in Washington declined for the fifth straight year to 400,000 acres, 20 percent less than was planted in 1989. The acreage for harvest declined a like amount to 390,000 acres harvested for grain, the lowest level since 1980. Growing conditions in the early part of the season were favorable, but the hot July temperatures damaged the grain and low test weights resulted. Prices were also weak during 1990 and averaged $2.15 per bushel or just under $90 per ton.

Harvest of the 1990 crop started during mid-July and was 59 percent completed by August 12, 3 points behind the 5-year average. Harvest was 99 percent completed by September 9, 1 point ahead of average. Stocks of barley in storage were considerably less than previous years throughout the season. The total quantity in storage at the end of the season was 3.6 million bushels with 1 million stored on farms and 2.6 million stored in commercial storages.



Acreage, Production and Price

Year	Acres Harvested	Yield Per Acre	Production	Season Avg. Price
	1,000	Bushels	1,000 Bushels	$/Bu.
1981	760	58	44,080	2.50
1982	810	61	49,410	2.15
1983	850	64	54,400	2.58
1984	980	65	63,700	2.25
1985	1,180	48	56,640	1.95
1986	900	50	45,000	1.67
1987	645	55	35,475	1.87
1988	560	62	34,720	2.45
1989	490	58	28,420	2.29
1990	390	58	22,620	2.15

Barley Stocks

Crop Year	September 1			December 1			March 1*			June 1*		
	On-Farm	Off-Farm	Total	On-Farm	Off-Farm	Total	On-Farm	Off-Farm	Total	On-Farm	Off-Farm	Total
	1,000 Bushels											
1981 1/	9,698	24,112	33,810	6,612	14,166	20,778	3,967	5,432	9,399	1,763	4,046	5,809
1982 1/	9,882	29,036	38,918	6,423	23,419	29,842	3,459	14,607	18,066	2,223	12,146	14,369
1983 1/	13,600	33,846	47,446	8,160	20,947	29,107	3,264	16,494	19,758	2,176	11,612	13,788
1984 1/	14,651	35,772	50,423	9,555	22,928	32,483	5,733	17,387	23,120	3,822	14,519	18,341
1985 1/	16,992	36,719	53,711	11,328	28,563	39,891	2/	2/	2/	5,664	20,791	26,455
1986 2/	-	-	-	-	-	-	-	-	-	3,000	21,485	24,485
1987 2/	-	-	-	-	-	-	-	-	-	2,700	8,859	11,559
1988	8,400	25,840	34,240	5,200	19,300	24,500	3,300	13,071	16,371	2,900	5,718	8,618
1989	5,700	18,916	24,616	5,000	16,449	21,449	2,100	6,788	8,888	1,050	4,689	5,739
1990	5,000	16,345	21,345	2,500	8,409	10,909	1,000	5,425	6,425	1,000	2,554	3,554

1/ Survey Dates October 1, January 1, and April 1.
2/ Estimates made for June 1 only.
* Following Year - Data not available.

BARLEY VARIETY SURVEY-1991 CROP

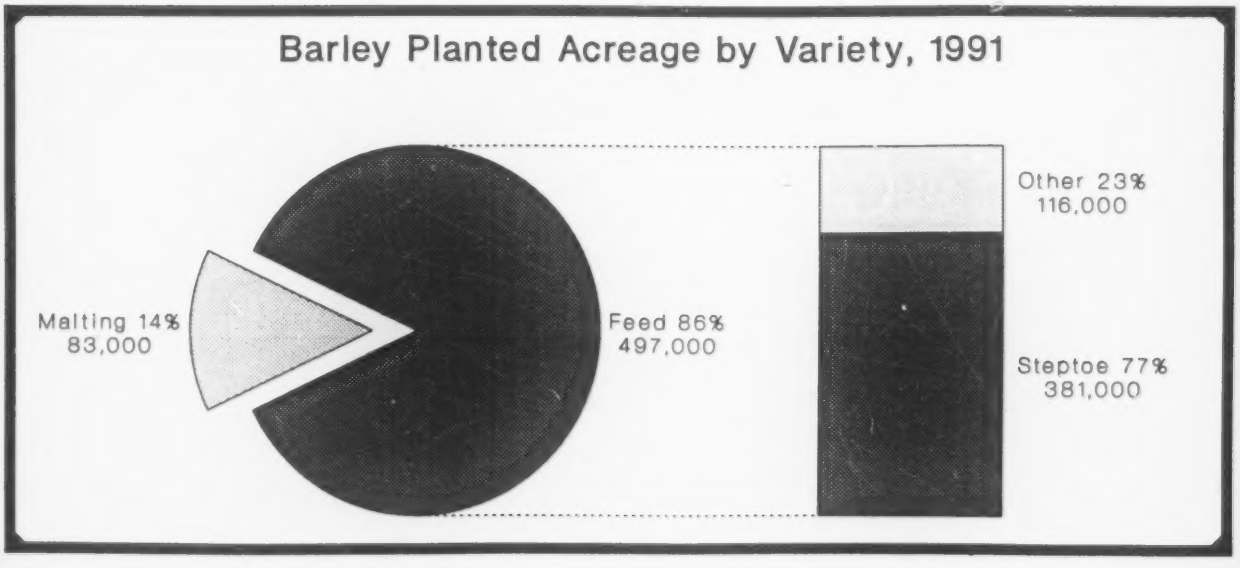
Barley acreage planted in Washington for 1991 rose for the first time in five years. This year's estimated 580,000 planted acres is up 45 percent from last year's 400,000 acres and is the same level as 1988. Additionally, it is 48 percent of the record high of 1.2 million acres planted in 1985.

Feed type barley varieties continue to be the most popular type of barley grown in Washington. The 497,000 acres of feed barley account for 85.7 percent of the total barley grown in the State. Steptoe is the most popular feed variety, comprising 381,000, or 76.7 percent of the total feed barley planted. Camelot shows a large increase from 19,700 acres in 1990 to 38,300 in 1991. Other varieties gaining popularity are Cougbar, Lewis, Columbia, and Gallatin with 10,700, 8,100, 7,000, and 7,000 acres respectively.

Malting barley increased in acreage but comprises a similar percentage of the State's total as last year. The acreage planted to malting varieties is 83,000, 14.3 percent of the total barley planted in the State, and is an increase of 25,000 acres from 1990. Harrington continues to be the most popular malting barley and accounts for 58.4 percent of the malting barley or 48,500 acres. Morex is the second most popular malting variety with 10,600 acres planted.

The 1991 Barley Variety Survey was conducted as a nonprobability survey in conjunction with the Wheat Variety Survey. Data were collected by mail, telephone, and personal interviews. Questionnaires were mailed to all the barley and wheat producers on our list May 2, 1991. Growers that were being interviewed on other surveys conducted in early June were also asked about barley varieties. There were 2,857 wheat and barley reports tabulated, which was a small increase from last year. A total of 323,000 acres of barley were surveyed which represented 56 percent of the 1991 crop.

Funds to conduct the 1991 Barley Survey were provided by the American Malting Barley Association, Inc. and the Washington Barley Commission.



1990 Acres Planted by Variety, By Agricultural Statistics Districts 1/, Washington

Type/Variety	West	Central	Northeast	E. Central	Southeast	State Total	Percent of Total
Feed Barley:			Acres				%
Steptoe	2,800	5,400	24,200	71,100	156,000	260,100	65.0
Camelot	-	1,500	2,500	12,000	3,700	19,700	4.9
Kamiak	-	-	-	700	8,200	9,300	2.3
Cougbar	-	-	500	-	5,600	6,500	1.6
Boyer	-	-	300	-	5,100	6,000	1.5
Gallatin	-	-	-	-	4,600	4,800	1.2
Menuet	2,800	-	1,200	-	-	4,000	1.0
Lewis	-	-	800	1,700	-	4,000	1.0
Lindy	-	-	-	4,000	-	4,000	1.0
Belford	-	1,200	800	-	-	2,800	.7
Columbia	700	500	-	800	800	2,800	.7
Seven	-	-	-	-	2,800	2,800	.7
Showin	-	-	-	-	900	2,400	.6
Medallion	-	1,000	-	1,000	-	2,000	.5
Schuyler	-	-	-	-	1,200	1,200	.3
Hesk	100	-	-	-	800	1,200	.3
Piston	-	-	600	-	-	1,200	.3
Bridger 82	-	-	-	-	-	800	.2
Westbred Gustoe	-	100	-	-	-	400	.1
Other Feed Barley	-	2,200	1,600	2,100	5,100	3,600	.9
Unknown Feed Barley	-	500	500	500	900	2,400	.6
Total Feed Barley	**6,400**	**12,400**	**33,000**	**94,500**	**195,700**	**342,000**	**85.5**
Malting Barley:							
Harrington	-	-	4,900	15,700	11,700	32,300	8.1
Morex	-	-	5,300	-	-	7,700	1.9
Crystal	-	-	-	3,100	-	5,100	1.3
Russell	-	-	-	3,000	-	3,500	.9
Clark	-	-	1,500	-	1,600	3,100	.8
Advance	-	-	-	-	-	1,600	.4
WA 8771	-	-	-	-	-	1,000	.3
Vanguard	-	-	-	-	-	600	.2
Other Malting Barley	-	-	1,800	3,000	6,000	2,700	.7
Unknown Malting Barley	100	100	-	200	-	400	.1
Total Malting Barley	**100**	**100**	**13,500**	**25,000**	**19,300**	**58,000**	**14.5**
State Total Barley	**6,500**	**12,500**	**46,500**	**119,500**	**215,000**	**400,000**	**100.0**

1/ The sum of the Districts may not add to the State total to avoid disclosure of individual operations.

1991 Acres Planted by Variety, By Agricultural Statistics Districts 1/, Washington

Type/Variety	West	Central	Northeast	E. Central	Southeast	State Total	Percent of Total
Feed Barley:			**Acres**				%
Steptoe	3,700	15,400	27,500	142,100	192,300	381,000	65.7
Camelot	-	2,500	4,200	20,500	11,100	38,300	6.6
Cougbar	-	-	-	-	10,400	10,700	1.8
Lewis	-	700	1,200	5,000	1,200	8,100	1.4
Columbia	1,600	1,700	-	3,000	-	7,000	1.2
Gallatin	-	-	-	200	6,800	7,000	1.2
Kamiak	-	200	-	-	5,300	6,700	1.2
Lindy	-	-	-	5,000	-	5,200	.9
Boyer	-	1,000	400	400	3,600	5,400	.9
Menuet	1,600	-	1,600	-	-	4,400	.8
Belford	-	1,500	-	600	200	2,500	.4
Hesk	-	-	-	-	1,500	2,500	.4
Seven	-	-	-	-	1,600	2,100	.4
Gus	-	-	-	1,400	300	1,900	.3
Westbred Gusto	-	1,000	-	-	400	1,600	.3
Bridger 82	-	-	500	-	-	1,100	.2
Lud	-	-	-	1,200	-	1,400	.2
Showin	-	300	-	-	700	1,100	.2
Piston	-	-	500	-	-	-	-
Whitford	-	200	-	-	-	300	.1
Other Feed Barley	600	3,600	1,300	4,600	2,500	6,400	1.2
Unknown Feed Barley	-	600	300	1,000	400	2,300	.4
Total Feed Barley	**7,500**	**28,700**	**37,500**	**185,000**	**238,300**	**497,000**	**85.7**
Malting Barley:							
Harrington	-	-	9,000	16,200	23,200	48,500	8.4
Morex	-	-	7,700	-	2,000	10,600	1.8
Klages	-	-	-	5,000	-	5,500	.9
Clark	-	-	1,500	-	1,200	5,200	.9
Crystal	-	-	-	-	3,700	3,700	.6
Russell	-	-	-	2,000	-	2,000	.3
WA 8771	-	-	400	800	-	1,200	.2
Advance	-	-	-	-	900	900	.2
Vanguard	-	-	400	-	-	400	.1
Other Malting Barley	-	1,700	500	6,000	500	4,700	.8
Unknown Malting Barley	-	100	-	-	200	300	.1
Total Malting Barley	**-**	**1,800**	**19,500**	**30,000**	**31,700**	**83,000**	**14.3**
State Total Barley	**7,500**	**30,500**	**57,000**	**215,000**	**270,000**	**580,000**	**100.0**

1/ The sum of the Districts may not add to the state total to avoid disclosure of individual operations.

Barley by County, 1989

County And District	All				Irrigated			Dryland		
	Acreage		Yld	Production	Acreage Harvested	Yld	Production	Acreage Harvested	Yld	Production
	Planted	Harvested								
	Acres		Bushels		Acres	Bushels		Acres	Bushels	
West										
Clallam	400	400	67.0	26,800	-	-	-	400	67.0	26,800
Clark	800	600	80.0	48,000	-	-	-	600	80.0	48,000
Island	400	400	73.0	29,200	-	-	-	400	73.0	29,200
Lewis	600	500	69.0	34,500	-	-	-	500	69.0	34,500
Skagit	2,000	1,900	95.0	180,500	-	-	-	1,900	95.0	180,500
Snohomish	300	300	70.0	21,000	-	-	-	300	70.0	21,000
Whatcom	400	400	65.0	26,000	-	-	-	400	65.0	26,000
Other Co.	600	500	68.0	34,000	-	-	-	500	68.0	34,000
Total	**5,500**	**5,000**	**80.0**	**400,000**	**-**	**-**	**-**	**5,000**	**80.0**	**400,000**
Central										
Benton	5,900	5,800	26.0	150,800	600	90.0	54,000	5,200	18.6	96,800
Chelan	300	300	30.0	9,000	-	-	-	300	30.0	9,000
Kittitas	1,000	900	93.0	83,700	700	109.0	76,300	200	37.0	7,400
Klickitat	8,600	8,200	40.0	328,200	400	95.0	38,000	7,800	37.2	290,200
Okanogan	1,000	900	36.0	32,400	200	63.0	12,600	700	28.3	19,800
Yakima	7,700	7,400	74.0	547,900	6,100	85.1	519,100	1,300	22.2	28,800
Total	**24,500**	**23,500**	**49.0**	**1,152,000**	**8,000**	**87.5**	**700,000**	**15,500**	**29.2**	**452,000**
Northeast										
Ferry	800	600	50.0	30,000	300	60.0	18,000	300	40.0	12,000
Pend Oreille	800	700	40.0	28,000	100	71.0	7,100	600	34.8	20,900
Spokane	52,400	52,100	63.0	3,282,700	1,100	109.0	119,900	51,000	62.0	3,162,800
Stevens	10,000	9,600	52.0	499,300	500	66.0	33,000	9,100	51.2	466,300
Total	**64,000**	**63,000**	**61.0**	**3,840,000**	**2,000**	**89.0**	**178,000**	**61,000**	**60.0**	**3,662,000**
East Central										
Adams	25,000	24,500	53.0	1,297,300	6,300	81.0	510,500	18,200	43.2	796,800
Douglas	6,500	6,500	44.0	286,000	400	90.0	36,000	6,100	41.0	250,000
Franklin	6,500	5,800	66.0	382,800	2,000	105.0	210,000	3,800	45.5	172,800
Grant	16,000	15,400	63.0	970,200	5,000	100.0	500,200	10,400	45.2	470,000
Lincoln	110,000	108,800	47.0	5,117,700	5,300	77.0	408,300	103,500	45.5	4,709,400
Total	**164,000**	**161,000**	**50.0**	**8,054,000**	**19,000**	**87.6**	**1,665,000**	**142,000**	**45.0**	**6,389,000**
Southeast										
Asotin	10,000	9,500	43.0	408,500	-	-	-	9,500	43.0	408,500
Columbia	10,000	9,500	59.0	560,500	-	-	-	9,500	59.0	560,500
Garfield	34,000	33,000	60.0	1,981,000	300	63.0	18,900	32,700	60.0	1,962,100
Walla Walla	22,000	21,500	71.0	1,526,000	1,400	80.0	112,000	20,100	70.3	1,414,000
Whitman	166,000	164,000	64.0	10,498,000	300	77.0	23,100	163,700	64.0	10,474,900
Total	**242,000**	**237,500**	**63.0**	**14,974,000**	**2,000**	**77.0**	**154,000**	**235,500**	**62.9**	**14,820,000**
State Total	**500,000**	**490,000**	**58.0**	**28,420,000**	**31,000**	**87.0**	**2,697,000**	**459,000**	**56.0**	**25,723,000**

- Not Applicable.

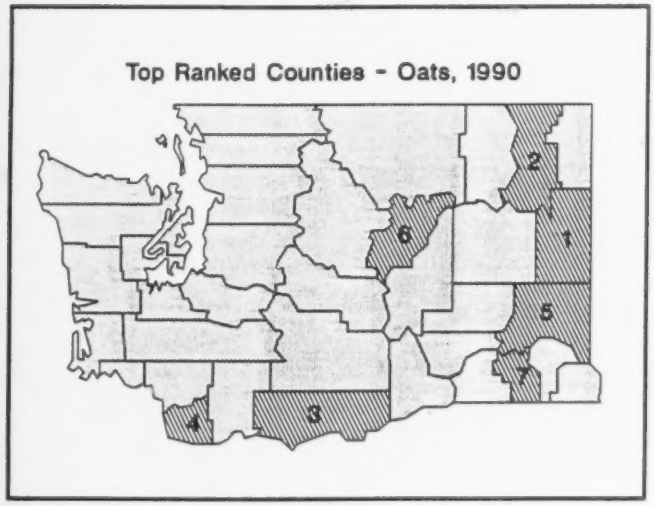
Barley by County, 1990

County And District	All				Irrigated			Dryland		
	Acreage				Acreage			Acreage		
	Planted	Harvested	Yld	Production	Harvested	Yld	Production	Harvested	Yld	Production
	Acres		Bushels		Acres	Bushels		Acres	Bushels	
West										
Clallam	400	400	62.0	24,800	-	-	-	400	62.0	24,800
Clark	2,300	2,000	88.0	176,000	-	-	-	2,000	88.0	176,000
Lewis	500	500	82.0	41,000	-	-	-	500	82.0	41,000
Skagit	1,700	1,600	84.0	134,400	-	-	-	1,600	84.0	134,400
Snohomish	300	300	52.0	15,600	-	-	-	300	52.0	15,600
Other Co.	1,300	1,200	65.2	78,200	-	-	-	1,200	65.2	78,200
Total	**6,500**	**6,000**	**78.3**	**470,000**	-	-	-	**6,000**	**78.3**	**470,000**
Central										
Kittitas	900	900	105.0	94,500	900	105.0	94,500	-	-	-
Klickitat	6,500	6,200	33.3	206,500	300	80.0	24,000	5,900	30.9	182,500
Okanogan	900	800	45.0	36,000	200	60.0	12,000	600	40.0	24,000
Yakima	3,600	3,500	91.1	319,000	2,800	102.0	285,500	700	47.9	33,500
Other Co.	600	600	58.3	35,000	300	90.0	27,000	300	26.7	8,000
Total	**12,500**	**12,000**	**57.6**	**691,000**	**4,500**	**98.4**	**443,000**	**7,500**	**33.1**	**248,000**
Northeast										
Spokane	37,300	37,100	56.4	2,091,000	1,000	64.7	64,700	36,100	56.1	2,026,300
Stevens	8,700	8,400	57.7	484,500	700	81.7	57,200	7,700	55.5	427,300
Other Co.	500	500	57.0	28,500	300	73.7	22,100	200	32.0	6,400
Total	**46,500**	**46,000**	**56.6**	**2,604,000**	**2,000**	**72.0**	**144,000**	**44,000**	**55.9**	**2,460,000**
East Central										
Adams	9,000	8,900	57.7	513,400	3,200	95.8	306,000	5,700	36.3	206,900
Douglas	2,400	2,400	39.0	93,700	200	84.0	16,800	2,200	35.0	76,900
Franklin	900	900	77.8	70,000	800	84.5	67,600	100	24.0	2,400
Grant	7,400	7,300	73.5	536,200	3,400	107.5	365,500	3,900	43.8	170,700
Lincoln	99,800	98,000	44.0	4,315,700	4,400	89.2	392,600	93,600	41.9	3,923,100
Total	**119,500**	**117,500**	**47.1**	**5,529,000**	**12,000**	**95.8**	**1,149,000**	**105,500**	**41.5**	**4,380,000**
Southeast										
Asotin	6,800	6,600	33.7	222,300	-	-	-	6,600	33.7	222,300
Columbia	7,300	7,100	57.2	406,100	100	60.0	6,000	7,000	57.2	400,100
Garfield	31,200	30,300	55.0	1,666,900	100	70.0	7,000	30,200	55.0	1,659,900
Walla Walla	10,000	9,800	60.5	592,800	1,000	94.5	94,500	8,800	56.6	498,300
Whitman	159,700	154,700	67.5	10,437,900	300	75.0	22,500	154,400	67.5	10,415,400
Total	**215,000**	**208,500**	**63.9**	**13,326,000**	**1,500**	**86.7**	**130,000**	**207,000**	**63.7**	**13,196,000**
State Total	**400,000**	**390,000**	**58.0**	**22,620,000**	**20,000**	**93.3**	**1,866,000**	**370,000**	**56.1**	**20,754,000**

- Not Applicable.

Oats

Acreage planted to oats declined 5,000 acres for the 1990 crop to 80,000 acres. The acreage harvested as grain was also down 5,000 acres to 40,000 acres, a decline of 11 percent from 1989. The yield for 1990 averaged 66 bushels per acre, up 3 bushels from the previous year to produce a total crop of 2.64 million bushels. The price for oats was also down for 1990 and averaged $1.20 per bushel.



Acreage, Production and Price

Year	Acres Harvested	Yield Per Acre	Production	Season Avg. Price
	1,000	Bushels	1,000 Bushels	$/Bu.
1981	32	50	1,600	2.19
1982	30	62	1,860	1.87
1983	33	63	2,079	1.61
1984	30	68	2,040	1.80
1985	33	65	2,145	1.50
1986	33	65	2,145	1.10
1987	30	66	1,980	1.40
1988	35	67	2,345	2.05
1989	45	63	2,835	1.35
1990	40	66	2,640	1.20

Oat Stocks

Crop Year	September 1			December 1			March 1*			June 1*		
	On-Farm	Off-Farm	Total	On-Farm	Off-Farm	Total	On-Farm	Off-Farm	Total	On-Farm	Off-Farm	Total
	1,000 Bushels											
1981 1/	1,040	272	1,312	800	213	1,013	560	175	735	256	131	387
1982 1/	1,283	616	1,899	986	602	1,588	707	399	1,106	335	356	691
1983 1/	1,663	615	2,278	1,040	526	1,566	707	314	1,021	312	180	492
1984 1/	1,530	344	1,874	1,020	313	1,333	551	163	714	326	137	463
1985 1/	1,823	270	2,093	1,158	241	1,399	2/	2/	2/	3/	174	3/
1986 2/	-	-	-	-	-	-	-	-	-	3/	133	3/
1987 2/	-	-	-	-	-	-	-	-	-	3/	180	3/
1988 2/	-	-	-	-	-	-	-	-	-	3/	428	3/
1989 2/	-	-	-	-	-	-	3/	528	3/	3/	513	3/
1990	3/	417	3/	3/	372	3/	3/	281	3/	3/	150	3/

1/ Survey Dates October 1, January 1, and April 1.
2/ Estimate made for June 1 only.
3/ Not published to avoid disclosure of individual reports.
* Following year. Data not available.

Oats by County

County And District	1989				1990			
	Acreage		Yield Per Acre	Production	Acreage		Yield Per Acre	Production
	Planted	Harvested			Planted	Harvested		
	Acres		Bushels		Acres		Bushels	
West								
Clark	21,000	2,200	80.0	176,000	18,500	2,100	84.0	176,400
Lewis	3,000	1,000	68.0	68,000	3,500	1,200	73.0	87,600
Skagit	2,000	500	75.0	37,500	1,400	500	74.0	37,000
Snohomish	-	-	-	-	500	-	-	-
Whatcom	2,000	500	75.0	37,500	1,400	500	76.0	38,000
Other Co.	3,000	800	70.0	56,000	4,200	700	80.0	56,000
Total	**31,000**	**5,000**	**75.0**	**375,000**	**29,500**	**5,000**	**79.0**	**395,000**
Central								
Benton	200	100	49.0	4,900	200	100	50.0	5,000
Chelan	300	100	33.0	3,300	300	100	34.0	3,400
Kittitas	3,300	2,300	81.0	186,300	2,900	2,500	79.0	197,500
Klickitat	1,500	1,200	65.0	78,000	1,400	1,100	72.0	79,200
Okanogan	1,200	800	50.0	40,000	2,400	700	57.0	39,900
Yakima	1,500	500	65.0	32,500	1,300	500	70.0	35,000
Total	**8,000**	**5,000**	**69.0**	**345,000**	**8,500**	**5,000**	**72.0**	**360,000**
Northeast								
Ferry	1,200	500	55.0	27,500	1,100	500	53.0	26,500
Pend Oreille	1,500	1,000	47.0	47,000	1,400	900	54.0	48,600
Spokane	14,500	11,700	63.0	737,100	13,400	9,800	68.0	666,500
Stevens	9,800	6,800	63.0	428,400	9,100	6,800	63.0	428,400
Total	**27,000**	**20,000**	**62.0**	**1,240,000**	**25,000**	**18,000**	**65.0**	**1,170,000**
East Central								
Adams	1,000	500	65.0	32,500	900	400	64.0	25,600
Douglas	4,000	3,600	50.0	180,100	3,600	2,700	50.0	134,900
Franklin	800	600	50.0	30,000	700	500	48.0	24,000
Grant	2,000	800	63.0	50,400	1,800	1,000	59.0	59,000
Lincoln	3,200	2,500	62.0	155,000	3,000	1,900	60.0	114,000
Total	**11,000**	**8,000**	**56.0**	**448,000**	**10,000**	**6,500**	**55.0**	**357,500**
Southeast								
Asotin	400	300	50.0	15,000	300	200	58.0	11,600
Columbia	2,500	2,300	64.0	147,200	2,200	1,800	74.0	133,200
Garfield	1,000	800	64.0	51,200	900	800	58.0	46,400
Walla Walla	800	600	56.0	33,600	700	400	65.0	26,000
Whitman	3,300	3,000	60.0	180,000	2,900	2,300	61.0	140,300
Total	**8,000**	**7,000**	**61.0**	**427,000**	**7,000**	**5,500**	**65.0**	**357,500**
State Total	**85,000**	**45,000**	**63.0**	**2,835,000**	**80,000**	**40,000**	**66.0**	**2,640,000**

- Not Applicable.

CORN

Planting of corn began the third week of April, was 62 percent planted by May 13, and was finished the second week of June. Crop development was slow getting started, but the warm summer weather spurred growth. Silage harvest started the last week of August, and harvest of grain started the last week of September. Harvest of silage was in the final stages by the end of October while grain harvest was only 39 percent complete.

Acreage harvested for grain dropped 10,000 acres to 80,000 acres for 1990. The yield was again the highest in the nation at 175 bushels per acre, the same as 1989. Total corn production was 14 million bushels; and with the price of $2.75 per bushel, the total value of production totaled $38.5 million.

The acreage harvested for silage held constant at 40,000 acres, the same level as the previous three years. Yields dipped slightly to 23 tons per acre, but the price was strong at $27 per ton to produce $24.8 million for Washington farmers.

Corn For Grain
Areage, Production and Price

Year	Acres Harvested	Yield Per Acre	Production	Season Avg. Price
	1,000	Bushels	1,000 Bushels	$/ Bu.
1981	114	130	14,820	3.05
1982	160	150	24,000	3.00
1983	110	160	17,600	3.62
1984	150	155	23,250	3.00
1985	135	160	21,600	2.65
1986	120	170	20,400	1.80
1987	80	170	13,600	2.15
1988	80	170	13,600	3.00
1989	90	175	15,750	2.85
1990	80	175	14,000	2.75

Corn For Silage
Acreage, Production and Price

Year	Acres Harvested	Yield Per Acre	Production	Season Avg. Price
	1,000	Tons	1,000 Tons	$/ Ton
1981	49	21	1,029	23.50
1982	60	22	1,320	23.00
1983	50	23	1,150	25.00
1984	50	23	1,150	23.00
1985	55	22	1,210	22.00
1986	50	24	1,200	22.50
1987	40	25	1,000	22.00
1988	40	25	1,000	24.00
1989	40	25	1,000	25.00
1990	40	23	920	27.00

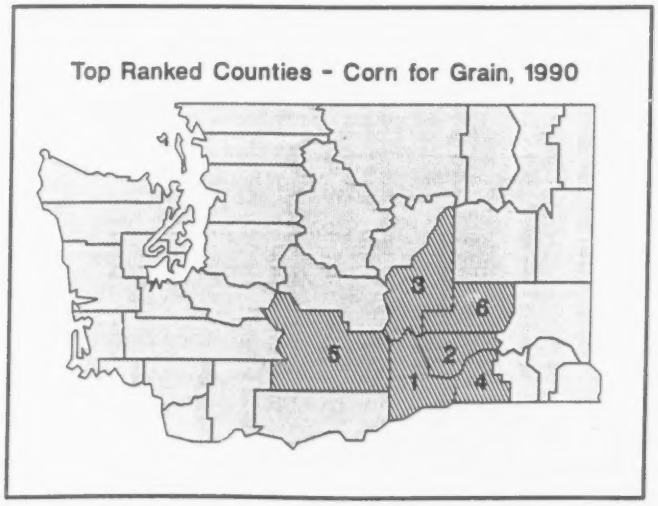
Corn Grain Stocks

Crop Year	December 1			March 1*			June 1*			September 1*		
	On-Farm	Off-Farm	Total	On-Farm	Off-Farm	Total	On-Farm	Off-Farm	Total	On-Farm	Off-Farm	Total
	1,000 Bushels											
1981 1/	5,928	6,449	12,377	2,519	5,633	8,152	1,482	1,681	3,163	1,186	391	1,577
1982 1/	6,720	3,552	10,272	3,600	3,023	6,623	1,920	1,727	3,647	960	2,172	3,132
1983 1/	5,280	8,232	13,512	3,168	6,748	9,916	1,760	6,356	8,116	158	1,396	1,554
1984 1/	7,440	11,393	18,833	2,093	5,422	7,515	1,163	1,593	2,756	116	944	1,060
1985 1/	4,320	8,549	12,869	2/	4,712	2/	2/	2,433	2/	2/	2,170	2/
1986	2/	9,126	2/	2/	6,125	2/	2/	5,112	2/	2/	6,301	2/
1987	2/	10,698	2/	2/	7,749	2/	2/	3,840	2/	2/	5,721	2/
1988	2/	5,721	2/	2/	4,841	2/	2/	4,966	2/	2/	3,435	2/
1989	2/	11,132	2/	2/	7,427	2/	2/	5,349	2/	2/	2,120	2/
1990	2/	7,471	2/	2/	7,323	2/	2/	4,073	2/	-	-	-

1/ Survey dates January 1, April 1, and October 1.
2/ Not published to avoid disclosure of individual reports.
* Following year. Data not available.

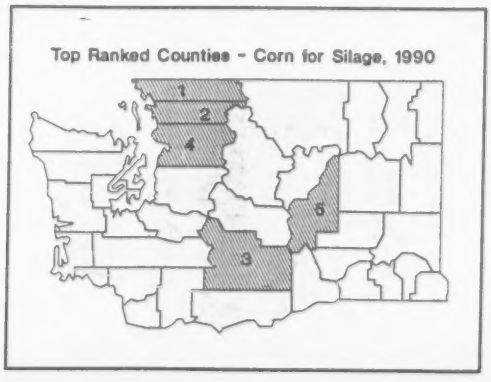
Corn for Grain by County

County and District	1989 Acreage Planted All Purpose	1989 Acreage Harvested For Grain	1989 Yield Per Acre	1989 Production	1990 Acreage Planted All Purpose	1990 Acreage Harvested For Grain	1990 Yield Per Acre	1990 Production
	Acres		Bushels		Acres		Bushels	
West								
Other Co.	27,000	0	.0	0	26,000	0	.0	0
Total	**27,000**	**0**	**.0**	**0**	**26,000**	**0**	**.0**	**0**
Central								
Benton	32,400	30,800	209.0	6,435,800	30,400	28,900	199	5,751,000
Kittitas	500	200	150.0	30,000	500	200	143	28,600
Klickitat	500	200	131.0	26,200	500	200	140	28,000
Okanogan	200	0	.0	0	600	0	0	0
Yakima	10,900	7,300	134.0	978,000	10,000	6,000	144	864,000
Total	**44,500**	**38,500**	**194.0**	**7,470,000**	**42,000**	**35,300**	**189**	**6,671,700**
Northeast								
Other Co.	500	400	105.0	42,000	500	400	100	40,000
Total	**500**	**400**	**105.0**	**42,000**	**500**	**400**	**100**	**40,000**
East Central								
Adams	7,500	6,400	132.0	844,500	6,700	5,500	152	836,000
Franklin	20,500	19,600	171.0	3,351,500	17,800	16,300	169	2,755,500
Grant	21,500	17,600	153.0	2,692,000	20,000	16,500	156	2,574,800
Lincoln	500	0	.0	0	500	0	0	0
Total	**50,000**	**43,600**	**158.0**	**6,888,000**	**45,000**	**38,300**	**161**	**6,166,300**
Southeast								
Walla Walla	8,000	7,500	180.0	1,350,000	6,500	6,000	187	1,122,000
Total	**8,000**	**7,500**	**180.0**	**1,350,000**	**6,500**	**6,000**	**187**	**1,122,000**
State Total	**130,000**	**90,000**	**175.0**	**15,750,000**	**120,000**	**80,000**	**175**	**14,000,000**



Corn for Silage by County

County and District	1989 Acreage Planted All Purpose	1989 Acreage Harvested For Silage	1989 Yield Per Acre	1989 Production	1990 Acreage Planted All Purpose	1990 Acreage Harvested For Silage	1990 Yield Per Acre	1990 Production
	Acres		Tons		Acres		Tons	
West								
Clark	2,300	2,300	21.0	48,400	2,500	2,500	20.0	50,000
Cowlitz	1,300	1,300	21.0	27,300	1,200	1,200	22.0	26,400
Grays Harbor	700	700	17.0	11,900	600	600	19.0	11,400
Island	500	500	20.0	10,000	500	500	21.0	10,500
King	1,200	1,200	24.0	28,800	1,100	1,100	24.0	26,400
Lewis	1,200	1,200	20.0	24,000	1,200	1,200	21.0	25,200
Pierce	700	700	22.0	15,400	700	700	22.0	15,400
Skagit	5,100	5,100	26.0	132,800	5,000	5,000	24.0	120,000
Snohomish	3,900	3,900	22.0	85,900	3,700	3,700	22.0	81,400
Thurston	500	500	19.0	9,500	400	400	22.0	8,800
Wahkiakum	400	400	15.0	6,000	400	400	17.0	6,800
Whatcom	9,000	9,000	27.0	243,000	8,500	8,500	25.0	212,500
Other Co.	200	200	20.0	4,000	200	200	20.0	4,000
Total	**27,000**	**27,000**	**24.0**	**647,000**	**26,000**	**26,000**	**23.0**	**598,800**
Central								
Benton	32,400	1,600	30.0	48,000	30,400	1,500	28.0	42,000
Kittitas	500	300	20.0	6,000	500	300	21.0	6,300
Klickitat	500	300	19.0	5,700	500	300	19.0	5,700
Okanogan	200	200	20.0	4,000	600	600	18.0	10,800
Yakima	10,900	3,600	29.0	104,300	10,000	4,000	24.0	96,000
Total	**44,500**	**6,000**	**28.0**	**168,000**	**42,000**	**6,700**	**24.0**	**160,800**
Northeast								
Other Co.	500	100	15.0	1,500	500	100	20.0	2,000
Total	**500**	**100**	**15.0**	**1,500**	**500**	**100**	**20.0**	**2,000**
East Central								
Adams	7,200	1,100	29.0	31,900	6,700	1,200	22.0	26,400
Franklin	20,500	900	28.0	25,200	17,800	1,500	20.0	30,000
Grant	21,500	3,900	27.0	105,400	20,000	3,500	23.0	80,500
Lincoln	500	500	21.0	10,500	500	500	21.0	10,500
Total	**50,000**	**6,400**	**27.0**	**173,000**	**45,000**	**6,700**	**22.0**	**147,400**
Southeast								
Walla Walla	8,000	500	21.0	10,500	6,500	500	22.0	11,000
Total	**8,000**	**500**	**20.0**	**10,500**	**6,500**	**500**	**22.0**	**11,000**
State Total	**130,000**	**40,000**	**25.0**	**1,000,000**	**120,000**	**40,000**	**23.0**	**920,000**



HAY

Hay prices remained strong and yields were up from 1989 boosting the total value of production to a record $277 million for 1990. Hay retained the 6th most valuable commodity in Washington. Alfalfa acreage harvested declined 10,000 acres, but the yield increased 0.5 tons to 4.8 tons per acre. Total production of alfalfa hay was 2,256,000 tons, an increase of 9 percent from last year. Other hay acreage increased 20,000 acres and the yield remained constant at 2.5 tons per acre. Total production of other hay totaled 800,000 tons for 1990.

Cool and wet weather early in the season damaged some of the first crop hay. However, warm weather in June and July were ideal for hay production. On July 29, the second cutting of alfalfa hay was 72 percent complete, 1 point ahead of the five-year average. Some of the Columbia Basin had fourth and fifth cuttings of alfalfa hay which was in the final stages by October 1.

Alfalfa Hay

Year	Acres Harvested	Yield Per Acre	Production
	1,000 Acres	Tons	1,000 Tons
1981	500	3.7	1,813
1982	460	4.0	1,840
1983	440	4.0	1,760
1984	475	4.3	2,043
1985	450	3.9	1,755
1986	470	4.2	1,974
1987	460	4.3	1,978
1988	490	4.2	2,058
1989	480	4.3	2,064
1990	470	4.8	2,256

Other Hay

Year	Acres Harvested	Yield Per Acre	Production
	1,000 Acres	Tons	1,000 Tons
1981	355	2.1	746
1982	340	2.3	782
1983	350	2.5	875
1984	325	2.7	878
1985	350	2.4	840
1986	340	2.5	850
1987	270	2.4	648
1988	310	2.5	775
1989	300	2.5	750
1990	320	2.5	800

All Hay: Acreage, Production, Price, and Stocks

Crop Year	Acres Harvested	Yield Per Acre	Production	Season Avg. Price	Stocks	
					Dec. 1	May 1*
	1,000 Acres	Tons	1,000 Tons	$/Ton	1,000 Tons	
1981 1/	845	3.03	2,559	67.00	1,663	512
1982 1/	800	3.28	2,622	77.00	1,337	262
1983 1/	790	3.34	2,635	78.50	1,528	237
1984 1/	800	3.65	2,921	80.50	1,490	146
1985 1/	800	3.24	2,595	84.50	1,246	182
1986	810	3.49	2,824	60.00	1,836	508
1987	730	3.60	2,626	54.50	2,048	394
1988	800	3.54	2,833	78.50	1,700	312
1989	780	3.61	2,814	89.50	1,351	225
1990	790	3.87	3,056	90.50	1,986	336

1/ Survey reference date for hay stocks was changed from January 1 to December 1 beginning with the 1986 crop.
* Following calendar year.

Hay by County, 1989

County and District	Alfalfa			Other Hay			All Hay		
	Harvested	Yield Per Acre	Production	Harvested	Yield Per Acre	Production	Harvested	Yield Per Acre	Production
	Acres	Tons		Acres	Tons		Acres	Tons	
West									
Clallam	2,800	4.00	11,200	3,300	2.50	8,250	6,100	3.19	19,450
Clark	2,600	3.00	7,800	8,500	2.20	18,700	11,100	2.39	26,500
Cowlitz	200	5.00	1,000	4,000	3.00	12,000	4,200	3.10	13,000
Grays Harbor	200	5.00	1,000	11,500	2.50	28,750	11,700	2.54	29,750
Island	2,000	4.00	8,000	3,000	1.60	4,800	5,000	2.56	12,800
Jefferson	200	3.00	600	2,800	2.00	5,600	3,000	2.07	6,200
King	700	3.00	2,100	5,500	2.00	11,000	6,200	2.11	13,100
Kitsap	100	2.00	200	1,500	2.00	3,000	1,600	2.00	3,200
Lewis	1,600	4.00	6,400	20,000	2.00	39,900	21,600	2.14	46,300
Mason	200	3.00	600	2,000	2.00	4,000	2,200	2.09	4,600
Pacific	300	3.00	900	5,000	2.00	10,000	5,300	2.06	10,900
Pierce	300	3.00	900	9,000	2.30	20,700	9,300	2.32	21,600
San Juan	100	3.00	300	3,300	1.70	5,600	3,400	1.74	5,900
Skagit	600	3.50	2,100	20,000	2.20	43,900	20,600	2.23	46,000
Skamania	300	3.00	900	300	2.00	600	600	2.50	1,500
Snohomish	600	3.00	1,800	12,000	2.30	27,600	12,600	2.33	29,400
Thurston	300	5.00	1,500	11,500	2.00	23,000	11,800	2.08	24,500
Wahkiakum	300	3.00	900	2,200	2.50	5,500	2,500	2.56	6,400
Whatcom	2,600	3.00	7,800	30,600	2.55	78,100	33,200	2.59	85,900
Total	16,000	3.50	56,000	156,000	2.25	351,000	172,000	2.37	407,000
Central									
Benton	15,500	5.20	80,600	2,400	2.50	6,000	17,900	4.84	86,600
Chelan	3,500	2.40	8,400	2,600	2.00	5,200	6,100	2.23	13,600
Kittitas	9,000	4.50	40,500	35,200	4.50	158,400	44,200	4.50	198,900
Klickitat	33,000	3.50	115,600	2,900	2.90	8,400	35,900	3.45	124,000
Okanogan	25,000	4.50	112,500	6,200	1.60	9,900	31,200	3.92	122,400
Yakima	29,000	4.50	130,400	7,700	3.00	23,100	36,700	4.18	153,500
Total	115,000	4.24	488,000	57,000	3.70	211,000	172,000	4.06	699,000
Northeast									
Ferry	10,000	2.00	20,000	2,600	2.00	5,200	12,600	2.00	25,200
Pend Oreille	5,000	2.00	10,000	21,900	1.60	35,000	26,900	1.67	45,000
Spokane	50,000	2.50	125,000	26,000	2.20	57,200	76,000	2.40	182,200
Stevens	45,000	2.56	115,000	8,500	1.60	13,600	53,500	2.40	128,600
Total	110,000	2.45	270,000	59,000	1.88	111,000	169,000	2.25	381,000
East Central									
Adams	17,000	6.00	102,000	4,000	3.50	14,000	21,000	5.52	116,000
Douglas	6,000	5.00	30,000	2,500	1.60	4,000	8,500	4.00	34,000
Franklin	63,000	5.50	346,500	700	3.00	2,100	63,700	5.47	348,600
Grant	108,000	5.50	594,500	3,900	4.10	16,000	111,900	5.46	610,500
Lincoln	12,000	2.50	30,000	7,900	2.90	22,900	19,900	2.66	52,900
Total	206,000	5.35	1,103,000	19,000	3.11	59,000	225,000	5.16	1,162,000
Southeast									
Asotin	1,200	2.00	2,400	800	1.50	1,200	2,000	1.80	3,600
Columbia	1,100	4.00	4,400	1,300	2.23	2,900	2,400	3.04	7,300
Garfield	1,200	3.50	4,200	800	2.00	1,600	2,000	2.90	5,800
Walla Walla	12,000	5.50	66,000	1,200	2.50	3,000	13,200	5.23	69,000
Whitman	17,500	4.00	70,000	4,900	1.90	9,300	22,400	3.54	79,300
Total	33,000	4.45	147,000	9,000	2.00	18,000	42,000	3.93	165,000
State Total	**480,000**	**4.30**	**2,064,000**	**300,000**	**2.50**	**750,000**	**780,000**	**3.61**	**2,814,000**

Hay by County, 1990

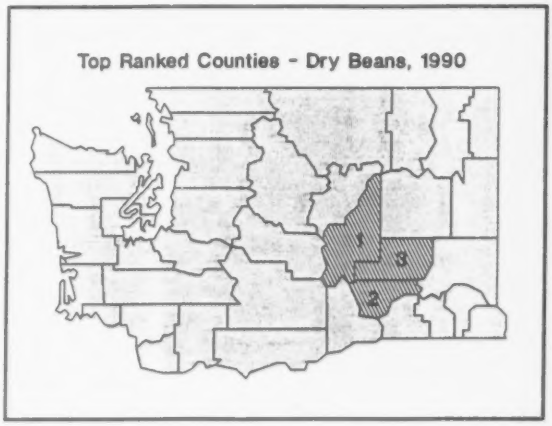
County and District	Alfalfa			Other Hay			All Hay		
	Harvested	Yield Per Acre	Production	Harvested	Yield Per Acre	Production	Harvested	Yield Per Acre	Production
	Acres	Tons		Acres	Tons		Acres	Tons	
West									
Clallam	2,900	3.97	11,500	3,300	2.94	9,700	6,200	3.42	21,200
Clark	2,700	3.37	9,100	9,100	2.50	22,700	11,800	2.70	31,800
Cowlitz	100	5.00	500	3,400	2.88	9,800	3,500	2.94	10,300
Grays Harbor	200	5.00	1,000	7,900	2.60	20,500	8,100	2.65	21,500
Island	2,400	3.88	9,300	3,200	2.31	7,400	5,600	2.98	16,700
Jefferson	100	4.00	400	2,100	2.19	4,600	2,200	2.27	5,000
King	400	4.25	1,700	4,900	2.02	9,900	5,300	2.19	11,600
Kitsap	600	1.00	600	1,400	1.43	2,000	2,000	1.30	2,600
Lewis	1,800	3.89	7,000	20,500	1.78	36,400	22,300	1.95	43,400
Mason	200	3.00	600	2,000	2.40	4,800	2,200	2.46	5,400
Pacific	200	4.50	900	4,300	1.65	7,100	4,500	1.78	8,000
Pierce	200	4.50	900	8,100	4.42	35,800	8,300	4.42	36,700
San Juan	100	3.00	300	2,700	2.26	6,100	2,800	2.29	6,400
Skagit	700	4.71	3,300	17,200	1.84	31,600	17,900	1.95	34,900
Skamania	200	4.50	900	400	1.75	700	600	2.67	1,600
Snohomish	700	2.43	1,700	27,500	1.58	43,400	28,200	1.60	45,100
Thurston	200	4.00	800	10,800	1.87	20,200	11,000	1.91	21,000
Wahkiakum	200	4.00	800	1,800	2.50	4,500	2,000	2.65	5,300
Whatcom	1,600	4.81	7,700	25,100	2.70	67,800	26,700	2.83	75,500
Total	15,500	3.81	59,000	155,700	2.22	345,000	171,200	2.36	404,000
Central									
Benton	13,800	6.07	83,700	1,600	3.44	5,500	15,400	5.79	89,200
Chelan	2,500	3.84	9,600	2,000	1.65	3,300	4,500	2.87	12,900
Kittitas	10,500	4.21	44,200	37,400	4.91	183,800	47,900	4.76	228,000
Klickitat	36,000	2.61	93,800	4,200	2.26	9,500	40,200	2.57	103,300
Okanogan	24,700	4.56	112,700	6,800	1.62	11,000	31,500	3.93	123,700
Yakima	30,500	5.25	160,000	9,000	3.10	27,900	39,500	4.76	187,900
Total	118,000	4.27	504,000	61,000	3.95	241,000	179,600	4.16	745,000
Northeast									
Ferry	8,900	2.57	22,900	2,300	2.22	5,100	11,200	2.50	28,000
Pend Oreille	3,700	2.87	10,600	18,400	1.71	31,400	22,100	1.90	42,000
Spokane	42,900	2.71	116,300	32,300	1.53	49,400	75,200	2.20	165,700
Stevens	43,500	2.81	122,200	8,000	2.26	18,100	51,500	2.72	140,300
Total	99,000	2.75	272,000	61,000	1.71	104,000	160,000	2.35	376,000
East Central									
Adams	20,200	6.22	125,700	4,000	3.50	14,000	24,200	5.77	139,700
Douglas	4,900	5.98	29,300	2,000	1.90	3,800	6,900	4.80	33,100
Franklin	59,500	6.57	391,000	1,800	4.67	8,400	61,300	6.52	399,400
Grant	111,000	6.22	690,000	8,500	3.88	33,000	119,500	6.05	723,000
Lincoln	8,400	3.57	30,000	11,500	2.42	27,800	19,900	2.91	57,800
Total	204,000	6.21	1,266,000	27,800	3.13	87,000	231,800	5.84	1,353,000
Southeast									
Asotin	900	2.67	2,400	1,100	1.18	1,300	2,000	1.85	3,700
Columbia	1,500	4.33	6,500	2,600	1.50	3,900	4,100	2.54	10,400
Garfield	1,600	4.25	6,800	900	2.44	2,200	2,500	3.60	9,000
Walla Walla	10,000	7.17	71,700	1,700	1.41	2,400	11,700	6.33	74,100
Whitman	19,500	3.47	67,600	8,200	1.61	13,200	27,700	2.92	80,800
Total	33,500	4.63	155,000	14,500	1.59	23,000	48,000	3.71	178,000
State Total	**470,000**	**4.80**	**2,256,000**	**320,000**	**2.50**	**800,000**	**790,000**	**3.87**	**3,056,000**

DRY BEANS

1990 was a difficult year for dry bean farmers. A hot weather spell during the summer caused blossoms to fall off the plants thus decreasing production 17,000 cwt. to 912,000 cwt.. Average yield was down 220 pounds at 1,940 pounds per acre. Even though yield and production were down, harvested acreage in 1990 increased 4,000 acres from the previous year to 47,000 acres. Not only did the farmers have to deal with the weather, but the price of beans also fell. The season average price decreased for the second consecutive year to $20.60 per cwt., the value of production, at $18.8 million was down $5.2 million from 1989. Nationally, Washington ranked ninth in dry bean production, down two rankings from 1989.

Dry Beans by County

Year/ County	Acreage		Yield Per Acre	Production
	Planted	Harvested		
	Acres		Lbs.	Cwt.
1989				
Adams	6,000	5,900	2,360	139,000
Franklin	5,300	5,300	2,250	119,000
Grant	26,300	25,500	2,250	573,000
Other Co.	6,400	6,300	1,560	98,000
Total	**44,000**	**43,000**	**2,160**	**929,000**
1990				
Adams	6,400	6,300	2,240	141,000
Franklin	7,200	7,200	2,100	151,000
Grant	26,700	26,000	2,100	545,000
Other Co.	7,700	7,500	1,000	75,000
Total	**48,000**	**47,000**	**1,940**	**912,000**



Acreage, Yield, Production and Price

Year	Acreage		Yield Per Acre	Production	Season Avg. Price	Value of Production
	Planted	Harvested				
	Acres		Lbs.	Cwt.	$/Cwt.	1,000 Dollars
1981	70,000	69,000	2,000	1,380,000	18.50	25,530
1982	38,000	37,000	2,070	766,000	13.50	10,341
1983	16,000	16,000	2,220	355,000	18.30	6,497
1984	35,000	34,000	2,080	707,000	17.80	12,585
1985	34,000	33,000	2,150	710,000	18.20	12,922
1986	32,000	31,000	2,160	670,000	17.80	11,926
1987	36,000	35,000	2,130	746,000	15.40	11,488
1988	37,000	36,000	2,060	742,000	28.10	20,850
1989	44,000	43,000	2,160	929,000	25.80	23,968
1990	48,000	47,000	1,940	912,000	20.70	18,878

Small Red Beans

Year	Acres Harvested	Yield Per Acre	Production
	Acres	Lbs.	Cwt.
1981	18,900	2,100	396,000
1982	14,500	2,030	294,000
1983	7,200	2,150	155,000
1984	8,000	2,100	168,000
1985	12,700	2,260	286,000
1986	12,900	2,360	304,000
1987	6,500	2,510	163,000
1988	10,900	2,230	243,000
1989	13,200	2,480	327,000
1990	12,600	2,210	278,000

Pinto Beans

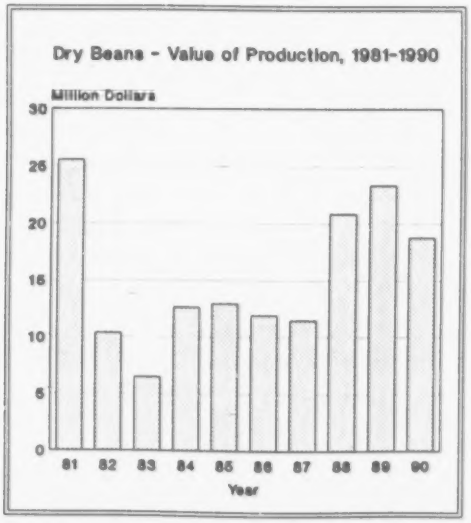
Year	Acres Harvested	Yield Per Acre	Production
	Acres	Lbs.	Cwt.
1981	31,700	2,030	643,000
1982	12,600	2,030	256,000
1983	3,400	2,290	78,000
1984	10,200	2,140	214,000
1985	9,200	2,160	199,000
1986	8,400	2,190	184,000
1987	11,200	2,220	249,000
1988	7,000	2,270	159,000
1989	14,000	2,140	299,000
1990	17,700	2,010	356,000

Small White Beans

Year	Acres Harvested	Yield Per Acre	Production
	Acres	Lbs.	Cwt.
1981	8,300	1,950	162,000
1982	6,400	2,290	147,000
1983	4,000	2,330	93,000
1984	12,000	2,000	240,000
1985	8,900	2,020	180,000
1986	3,900	2,210	86,000
1987	9,500	2,190	208,000
1988	10,800	2,180	235,000
1989	6,700	2,160	145,000
1990	3,400	2,260	77,000

Pink Beans

Year	Acres Harvested	Yield Per Acre	Production
	Acres	Lbs.	Cwt.
1981	10,000	1,770	177,000
1982	3,200	1,960	63,000
1983	1,100	2,000	22,000
1984	2,500	2,080	52,000
1985	1,600	2,000	32,000
1986	2,400	2,080	50,000
1987	1,100	2,450	27,000
1988	800	2,250	18,000
1989	1,800	2,330	42,000
1990	2,900	2,380	69,000

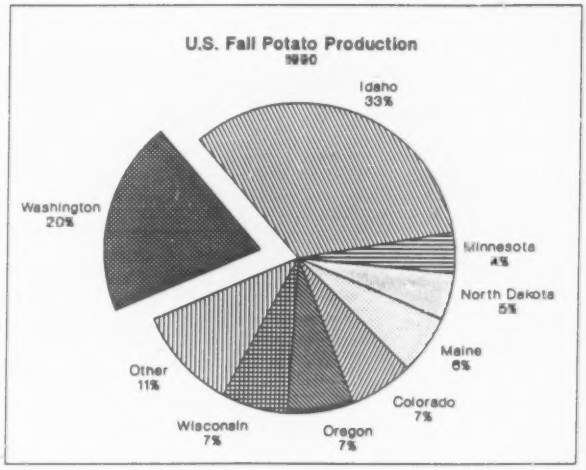


POTATOES

Potato planting began in late March and was completed by June 3. Harvest began the second week of July and was complete by the second of November.

Potato acreage planted in Washington increased 15,000 acres to 133,000 acres in 1990 from the 1989 acreage of 118,000 acres. Harvested acres increased 14,000 acres to 132,000 acres in 1990 from the 1989 acreage of 118,000. The 1990 yield was 515 cwt. per acre, down 30 cwt. from 1989 and 35 cwt. from the 1988 record year. Production was 67,980,000 cwt., an increase of 5.7 percent from 1989.

The preliminary season average price for the 1990 crop of $4.90 per cwt. shows a 5 percent decrease over the 1989 season average price. Stocks throughout the season were normal. The May 1, 1991 stocks were at up slightly at 8,900,000 cwt.



Potatoes: Acreage, Production, and Price

Crop Year	Acreage		Yield Per Harvested Acre	Production	Season Average Price	Value of Production
	Planted	Harvested				
	Acres		Cwt.	1,000 Cwt.	$/Cwt.	1,000 Dol.
1971	78,000	78,000	386	30,110	1.40	42,154
1972	75,000	75,000	418	31,365	2.09	65,553
1973	84,000	82,000	430	35,260	2.90	102,254
1974	100,000	98,000	420	41,160	3.65	150,234
1975	107,000	105,000	460	48,300	3.15	152,145
1976	124,000	124,000	450	55,800	2.50	139,500
1977	110,000	110,000	460	50,600	2.80	141,680
1978	111,000	111,000	455	50,505	2.45	123,737
1979	102,000	102,000	475	48,450	2.55	123,548
1980	87,000	87,000	505	43,935	4.40	193,314
1981	108,000	108,000	490	52,920	3.95	209,034
1982	110,000	110,000	480	52,800	3.75	198,000
1983	104,000	104,000	520	54,080	4.25	229,840
1984	116,000	115,000	495	56,925	5.15	293,164
1985	127,000	126,000	505	63,630	3.45	219,524
1986	119,000	118,000	525	61,950	4.30	266,385
1987	124,000	124,000	540	66,960	3.65	244,404
1988	115,000	115,000	550	63,250	4.50	284,625
1989	118,000	118,000	545	64,310	5.15	331,197
1990	133,000	132,000	515	67,980	4.90	333,102

Potatoes Used for Processing 1/

Area and Storage Season	Accumulated as of: Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	Entire Season
	1,000 Cwt.						
Washington and Other Area, Oregon							
1988-89	19,200	23,455	27,280	31,960	37,575	41,795	51,555
1989-90	23,635	28,015	33,170	38,610	44,510	49,595	57,695
1990-91	24,480	29,830	35,170	39,950	45,600	50,780	4/
Maine 2/							
1988-89	1,685	2,190	2,830	3,455	4,230	4,915	6,915
1989-90	2,055	2,660	3,510	4,000	4,620	5,210	6,900
1990-91	2,105	2,690	3,420	3,900	4,460	5,120	4/
Idaho & Malheur Co. Oregon							
1988-89	18,740	24,270	29,420	34,720	41,360	48,080	64,425
1989-90	22,200	28,140	34,240	40,270	46,330	51,810	66,010
1990-91	24,780	31,100	37,550	44,220	51,030	58,660	4/
Other States 3/							
1988-89	5,805	7,450	9,040	10,645	12,340	14,075	18,385
1989-90	6,340	8,010	9,860	11,535	13,240	15,100	20,610
1990-91	6,585	8,755	10,645	12,595	14,805	17,360	4/
Eight State Total							
1988-89	45,430	57,365	68,570	80,780	95,505	108,865	141,280
1989-90	54,230	66,825	80,780	94,415	108,700	121,715	151,215
1990-91	57,950	72,375	86,785	100,665	115,895	131,920	4/

1/ Total quantity received and used for processing, regardless of the state in which the potatoes were produced. Does not include quantities used for potato chips in Maine, Mich., Minn., N. Dakota, or Wis.
2/ Includes Maine grown potatoes only.
3/ Michigan, Minnesota, North Dakota, and Wisconsin.
4/ Data available September 1991.

Fall Potato Production and Stocks

State and Crop Year	Production	Stocks Dec. 1	Jan. 1*	Feb. 1*	Mar. 1*	Apr. 1*	May 1*
	1,000 Cwt.						
Idaho							
1988	102,610	74,000	65,500	58,000	50,500	40,500	27,000
1989	102,475	70,500	61,500	53,000	44,500	35,000	22,000
1990	112,340	79,500	70,000	60,500	51,500	39,500	23,500
Oregon							
1988	20,735	15,300	13,100	11,100	8,700	6,300	4,500
1989	23,308	13,800	12,100	10,000	7,800	5,900	4,100
1990	23,014	15,200	12,700	10,100	8,000	6,000	3,700
Washington							
1988	63,250	36,700	32,100	27,700	22,500	16,200	10,700
1989	64,310	34,500	30,400	25,100	20,000	13,100	7,100
1990	67,980	35,500	67,980	24,500	19,800	14,000	8,900
Total 15 Major States							
1988	305,623	206,420	177,750	151,050	124,485	92,585	59,355
1989	316,097	202,050	173,550	144,029	116,600	84,320	50,675
1990	335,986	217,300	186,160	154,310	126,030	91,910	54,400

* Calendar year following year of production.

1990 WASHINGTON AND U.S. POTATO PRODUCTION

Washington: Potato growers in Washington produced a record 67.98 million cwt. for the 1990 crop, an increase of 5.7 percent from 1989 and 1.02 million cwt. above the previous record set in 1987. The 1990 State acreage yield was 515 cwt./acre, 30 cwt. below the 1989 yield and 35 cwt. below the 1988 record year of 550 cwt./acre. Harvested acreage, at 132,000 acres, was up 14,000 acres from a year ago. Russet Burbank continued to be the leading variety with 72.7 percent of the planted acreage down from 79.3 percent in 1989. Other leading varieties for the 1990 crop were: Shepody, 6.8 percent; Norkotah, 7.3 percent; and Norchip, 2.6 percent.

United States: Fall potato production for 1990 was 344,317 thousand cwt., slightly under the record 344,998 thousand cwt. set in 1987. Harvested acreage was 1.15 million acres, an increase of 6 percent from 1989. The average yield was 298 cwt./acre, a decrease of 1 cwt./acre from 1989.

Potato Acreage, Yield, and Production

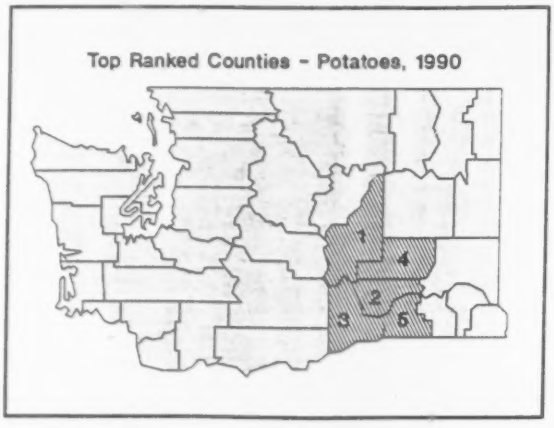
Seasonal Group and State	Area Harvested		Yield		Production		
	1989	1990	1989	1990	1988	1989	1990
	1,000 Acres		Cwt.		1,000 Cwt.		
Winter Total	13.1	13.2	211	177	2,616	2,764	2,343
Spring Total	88.9	95.1	235	254	20,110	20,852	24,163
Summer Total	93.5	96.3	237	239	22,154	22,155	23,044
Fall							
California	16.1	16.4	400	380	6,105	6,440	6,232
Colorado	61.5	65.0	335	340	19,040	20,603	22,100
Connecticut	.3	1/	210	1/	135	63	1/
Idaho-SW Co	17.0	20.0	395	395	7,200	6,715	7,900
-Oth Co	336.0	373.0	285	280	95,410	95,760	104,440
Indiana	4.0	3.9	240	220	756	960	858
Maine	80.0	76.0	275	270	22,000	22,000	20,520
Massachusetts	2.5	2.6	240	250	572	600	650
Michigan	30.0	33.0	245	280	7,820	7,350	9,240
Minnesota	66.0	68.0	210	210	12,075	13,860	14,280
Montana	8.1	8.9	275	280	2,156	2,228	2,492
Nebraska	7.9	9.3	320	305	2,128	2,528	2,837
Nevada	8.0	7.0	325	335	2,480	2,600	2,345
N.Y.-Long Is	7.3	6.5	260	300	1,992	1,898	1,950
-Upstate	21.5	22.0	220	270	4,800	4,730	5,940
North Dakota	137.0	145.0	110	115	15,525	15,070	16,675
Ohio	7.9	7.8	185	245	1,697	1,462	1,911
Oregon-Malheur	5.2	6.8	390	360	2,400	2,028	2,448
-Other Co	44.8	45.2	475	455	18,335	21,280	20,566
Pennsylvania	20.5	22.5	230	240	3,690	4,715	5,400
Rhode Island	1.2	1.2	250	245	300	300	294
South Dakota	9.0	9.0	220	220	1,600	1,980	1,980
Utah	6.1	6.2	245	265	1,617	1,495	1,643
Washington	118.0	132.0	545	515	63,250	64,310	67,980
Wisconsin	68.0	65.0	340	355	20,000	23,120	23,075
Wyoming	2.1	2.2	275	255	475	578	561
Fall Total	**1,086.0**	**1,154.5**	**299**	**298**	**313,558**	**324,673**	**344,317**
U.S. TOTAL	**1,281.5**	**1,359.1**	**289**	**290**	**356,438**	**370,344**	**393,867**

1/ Estimates discontinued.

Potatoes by County

County and District	1989 Acreage Planted	1989 Acreage Harvested	1989 Yield Per Acre	1989 Production	1990 Acreage Planted	1990 Acreage Harvested	1990 Yield Per Acre	1990 Production
	Acres		Cwt.	1,000 Cwt.	Acres		Cwt.	1,000 Cwt.
West								
Clark	500	500	330	165.0	500	500	325	162.5
Skagit	3,600	3,600	340	1,224.0	3,600	2,700	320	864.0
Whatcom	1,200	1,200	300	360.0	1,200	1,100	290	319.0
Other Counties	700	700	330	231.0	700	700	300	210.0
Total	**6,000**	**6,000**	**330**	**1,980.0**	**6,000**	**5,000**	**311**	**1,555.5**
Central								
Benton	-	-	-	-	23,700	23,700	525	12,442.5
Kittitas	-	-	-	-	1,100	1,100	380	418.0
Klickitat	-	-	-	-	700	700	455	318.5
Yakima	-	-	-	-	1,600	1,600	355	568.0
Other Counties	-	-	-	-	100	100	305	30.5
Total	**24,400**	**24,400**	**575**	**14,030.0**	**27,200**	**27,200**	**507**	**13,777.5**
Northeast								
Stevens	300	300	350	105.0	300	300	345	103.5
Other Counties	300	300	450	135.0	500	500	350	175.0
Total	**600**	**600**	**400**	**240.0**	**800**	**800**	**348**	**278.5**
East Central								
Adams	15,500	15,500	560	8,680.0	16,500	16,500	530	8,745.0
Franklin	28,000	28,000	555	15,530.0	34,200	34,200	535	18,297.0
Grant	34,700	34,700	545	18,908.0	36,500	36,500	525	19,162.5
Lincoln	1,800	1,800	490	882.0	1,800	1,800	480	864.0
Total	**80,000**	**80,000**	**550**	**44,000.0**	**89,000**	**89,000**	**529**	**47,068.5**
Southeast								
Walla Walla	-	-	-	-	10,000	10,000	530	5,300.0
Total	**7,000**	**7,000**	**580**	**4,060.0**	**10,000**	**10,000**	**530**	**5,300.0**
State Total	**118,000**	**118,000**	**545**	**64,310.0**	**133,000**	**132,000**	**515**	**67,980.0**

- Data not published at county level due to disclosure of individual operations.



Potato Program

The estimating program for potatoes includes a number of estimates that span more than a year. Nationally, potatoes are directed into seasonal groups of winter, spring, summer and fall. Washington is one of 24 fall potato states. Stocks estimates are made for the 15 major states that account for about 97 percent of the fall production total. Washington is the number 2 producing state of fall potatoes and accounts for about one-fifth of the nation's total.

Estimates for potatoes are made using information collected from the producers and from agribusinesses, mainly potato processors. Data from the growers are used for acreage, yield, production, and stocks estimates. Data from the potato processors are used for the potato processing report, cold storage, stocks and prices. Secondary information is utilized as check data, such as marketings and grower disposition surveys. Acreage estimates are set with a combination of survey indications that come from both a probability survey and a non-probability survey. A general description of a probability sample is where each operation in the state had a chance of being selected and a response is necessary for each operation selected. Potato growers are surveyed for acreage planted and intentions for harvest as of June 1 and the estimates are released in the July Crop Production Report. The next estimates of acreage are released in the November Crop Report and the Annual Crop Production Report in January. A potato grower survey is done in conjunction with the fall acreage and production survey in November and any revisions to the June estimate are based on information obtained in November. The final end-of-season estimate is published in the Potato Report published in late September the following year.

Yield estimates for fall potatoes are forecast as of November 1 and December 1. Washington has the highest average yield in the United States. Survey indications from potato producers are used in conjunction with an objective yield survey. The objective yield survey is relatively easy to understand in principle. Two units are laid out for each sample. Row widths and plant counts are taken in a 20 foot section of the row to establish an estimate of plants per acre. Three hills are dug from each unit and the potatoes weighed. The extension of the average weight per hill times the plant population produces an indication of gross yield. A post-harvest sample is used to estimate the quantity of potatoes left in the field after harvest and is deducted from the gross yield for the net yield, the quantity taken from the field. Although the procedure is straight forward, the key is randomly placing the samples in fields so that the 220 samples, selected in Washington State, will represent the state's acreage accurately. Information regarding varieties is also collected during the potato objective yield survey. In Washington, Russet Burbank is the most popular variety, as it can be used for both processing and fresh market.

Harvest begins in July for the early varieties of Shepody, Norkotas, and Norgolds. Harvest of the Russet Burbanks usually lasts through the middle of November. Stocks estimates begin on December 1 and run through May 1. Potato cellar operators are surveyed beginning December 1 and this data, along with disposition information collected from processors, is used to set the December 1 stocks estimate. Idaho, Washington and Oregon complete a Tri-State balance sheet for stocks each month from December 1 through May 1, where inshipments, outshipments, and the total disposition of potatoes within each state and the Tri-State area are tabulated. Processing data are published from October 1 through May 1. Due to disclosure problems, processing data for Idaho, Oregon and Washington are published as two estimates, Idaho and Malheur County Oregon, and Washington and Other Counties in Oregon. Potato stocks reports which contain processing, acreage and production are published from December 1 through May 1, at both the national and state levels.

Each year, a survey on disposition of the previous year's crop is done during June in conjunction with the acreage survey for the current year's planted acreage. The annual disposition and processing estimates are published during the end of September in the Annual Potatoes Bulletin.

Crop Progress for Potatoes, Washington
Percent of Activity Completed by Date Indicated

Activity	April				May				June			
Year	7	14	21	28	5	12	19	26	2	9	16	23
Planted												
1986	8	28	38	51	77	85	97	98	100			
1987	11	26	41	59	78	91	96	100	100			
1988	13	29	50	73	87	96	99	100	100			
1989	23	31	46	68	79	87	94	97	99			
1990	14	28	56	73	81	91	96	99	100			
1986-90 Avg	14	28	46	65	80	90	96	99	100			
Emerged												
1986	0	5	14	22	28	34	39	48	71	86	95	100
1987	0	2	8	22	38	52	65	83	96	100	100	100
1988	0	6	17	32	40	52	68	81	92	100	100	100
1989	1	4	15	34	47	57	71	79	91	100	100	100
1990	1	11	19	29	39	53	64	78	88	95	99	100
1986-90 Avg	0	6	15	28	38	50	61	74	88	96	99	100

Activity	July				August				September				
Year	7	14	21	28	4	11	18	25	1	8	15	22	29
Harvested													
1986	0	0	0	0	0	2	8	13	18	23	28	31	36
1987	1	2	3	5	7	9	11	14	20	25	31	36	44
1988	0	2	3	4	8	11	15	21	26	31	35	39	50
1989	0	1	2	4	8	10	12	16	21	25	31	41	54
1990	0	1	2	4	8	11	14	17	22	33	38	42	47
1986-90 Avg	0	1	2	3	6	9	12	16	21	27	33	38	46

Activity	October				November			
Year	6	13	20	27	3	10	17	24
Harvested								
1986	43	51	66	80	87	94	97	100
1987	59	69	82	90	98	100	100	100
1988	59	69	81	91	95	98	100	100
1989	66	80	90	98	99	100	100	100
1990	59	70	79	91	99	100	100	100
1986-90 Avg	57	68	80	90	96	98	99	100

MINT

Washington continues to be the leader in spearmint oil production in the United States. Growers produced 1,676 thousand pounds of spearmint oil in 1990, accounting for 65 percent of the total U.S. population. Production increased 52 percent due to an increase in average yield of 10 pounds to 114 pounds per acre in 1990. The State yield per acre was 38 pounds greater than the national average of 76 pounds per acre. The average price for both Native and Scotch Spearmint were higher than last year, although the State average spearmint price of $13.00 per pound was less than the national average of $14.70 per pound.

Washington ranks second in the U.S. behind Oregon in peppermint oil production. Washington growers accounted for 24 percent of the total U.S. production, while Oregon accounted for 48 percent of the national production. Washington growers had the highest average yield in the U.S. at 93 pounds per acre, 25 pounds above the national average. The average price increased 70 cents from the 1989 price, but remained significantly below the $14.30 per pound price in 1988, and well below the national average price of $14.00 per pound.

Native Spearmint
Acreage, Production and Price

Year	Acres Harvested	Yield Per Acre	Production	Season Avg. Price
	Acres	Pounds	1,000 Pounds	Dollars/ Pound
1981	9,300	135	1,253	7.10
1982	3,400	128	435	9.00
1983	5,000	103	515	9.40
1984	6,800	115	784	10.00
1985	9,000	125	1,125	9.50
1986	8,000	156	1,244	9.00
1987	5,900	149	879	9.70
1988	5,800	142	824	10.00
1989	6,300	114	718	10.50
1990	8,800	117	1,028	10.80

Peppermint
Acreage, Production and Price

Year	Acres Harvested	Yield Per Acre	Production	Season Avg. Price
	Acres	Pounds	1,000 Pounds	Dollars/ Pound
1981	8,300	78	647	8.50
1982	8,900	80	712	8.20
1983	9,500	80	760	9.40
1984	12,400	84	1,042	10.10
1985	13,200	87	1,148	8.30
1986	10,900	89	970	8.35
1987	11,500	87	1,001	10.40
1988	16,500	86	1,419	14.30
1989	17,300	91	1,574	11.20
1990	18,100	93	1,683	11.90

Scotch Spearmint
Acreage, Production and Price

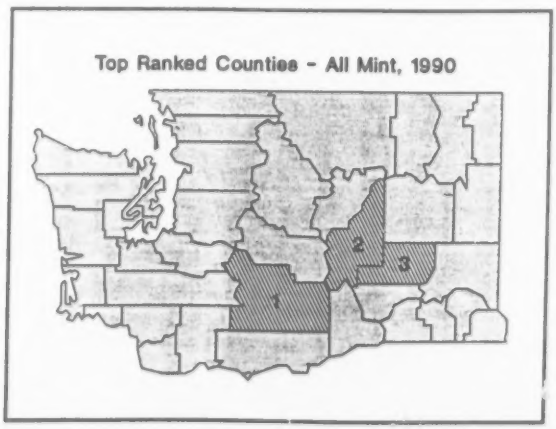
Year	Acres Harvested	Yield Per Acre	Production	Season Avg. Price
	Acres	Pounds	1,000 Pounds	Dollars/ Pound
1981	3,500	59	206	11.50
1982	3,500	69	241	14.70
1983	4,400	90	397	14.70
1984	4,500	104	470	14.50
1985	5,000	96	480	14.00
1986	5,000	123	615	14.00
1987	4,300	123	529	14.00
1988	3,900	112	437	14.90
1989	4,300	89	383	15.70
1990	5,900	110	648	16.50

Mint by County

Crop and County	1989			1990		
	Acres Harvested	Yield Per Acre	Production	Acres Harvested	Yield Per Acre	Production
	Acres	Pounds	1,000 Pounds	Acres	Pounds	1,000 Pounds
Scotch Spearmint						
Grant	500	62.0	31	700	125.7	88
Yakima	3,000	92.0	276	4,100	113.9	467
Other 1/	800	95.0	76	1,100	85.5	94
Total	**4,300**	**89.0**	**383**	**5,900**	**110.0**	**649**
Native Spearmint						
Grant	500	92.0	46	800	105.0	84
Yakima	5,200	115.0	598	7,400	115.5	855
Other 1/	600	125.0	75	600	146.7	88
Total	**6,300**	**114.0**	**719**	**8,800**	**117.0**	**1,027**
All Spearmint						
Grant	1,000	77.0	77	1,500	114.7	172
Yakima	8,200	106.6	874	11,500	115.0	1,322
Other 1/	1,400	107.9	151	1,700	107.1	182
Total	**10,600**	**104.0**	**1,102**	**14,700**	**114.0**	**1,676**
Peppermint						
Adams	1,200	100.0	120	1,300	96.2	125
Grant	4,000	95.0	380	4,100	103.9	426
Yakima	10,700	92.0	984	10,900	99.0	1,079
Other 2/	1,400	64.3	90	1,800	67.1	121
Total	**17,300**	**91.0**	**1,574**	**18,100**	**93.0**	**1,683**

1/ Other Counties include Adams and Benton Counties.

2/ Other Counties include Benton, Clark, and Lincoln Counties.



HOPS

Washington led the Nation in the production of hops with 41.9 million pounds for the 1990 crop, which accounts for 74 percent of the U.S. supply. Washington production for the 1990 crop was 3 percent less than a year earlier and was the result of lower yields. Acreage harvested at 25,663 acres increased 5 percent over 1989 while the per acre yield of 1,634 pounds was 148 pounds below a year earlier.

The season acreage price of $1.41 per pound was 8 cents more than 1989. The value of production for Washington hops in 1990 was $59.1 million, 3 percent more than 1989.

Data for 1989 and 1990 are presented by variety. Galena overtook Cluster as the most popular variety by acreage, followed by Nugget, Willamette, and Tettnanger. However, Cluster still leads in total production, just 3 percent more than Galena, because of higher yields for Clusters.

Data collection for the 1989-90 basic hop data was funded through the Hop Growers of America and the various State hop commissions. These basic data include the acreage strung for harvest, yield and production, plus stocks data for March 1 and September 1.

Acreage, Production and Price

Year	Washington				United States			
	Acres Harvested	Yield Per Acre	Production	Season Avg. Price	Acres Harvested	Yield Per Acre	Production	Season Avg. Price
	1,000	Pounds	1,000 Pounds	Cents/ Pound	1,000	Pounds	1,000 Pounds	Cents/ Pound
1981	31.3	1,900	59,470	150.0	43.1	1,836	79,140	151.0
1982	28.1	2,070	58,167	160.0	39.6	1,980	78,558	174.0
1983	26.5	1,930	51,145	180.0	36.9	1,850	68,111	193.0
1984	22.7	1,920	43,584	199.0	30.8	1,820	56,167	210.0
1985 1/	19.5	1,870	36,465	180.0	28.1	1,770	49,713	203.0
1986 1/	17.4	2,040	35,496	159.0	25.0	1,960	49,062	178.0
1987 1/	20.1	1,860	37,398	132.0	28.3	1,770	50,048	151.0
1988 1/	23.1	1,721	39,751	136.0	33.4	1,638	54,696	140.0
1989 1/	24.3	1,782	43,377	133.0	34.5	1,717	59,326	138.0
1990	25.7	1,634	41,942	141.0	35.5	1,603	56,855	147.0

1/ California data are combined with Washington's to avoid disclosure of individual operations.

Hop Stocks, U.S.

Year	March 1				September 1			
	Stocks Held By: 1/			Total Stocks	Stocks Held By: 1/			Total Stocks
	Growers 2/	Dealers	Brewers		Growers 2/	Dealers	Brewers	
	1,000 Lbs.							
1982	1,400	16,000	54,290	71,690	1,200	2,090	43,740	47,030
1983	1,600	16,670	62,050	80,320	1,380	3,000	56,700	61,080
1984	1,360	19,530	79,440	100,330	1,360	6,256	60,480	68,096
1985	1,660	15,196	72,949	89,805	1,400	10,930	58,130	70,460
1986	1,960	15,720	72,240	89,920	1,390	8,930	60,630	70,950
1987	1,670	13,970	72,860	88,500	1,620	6,580	62,430	70,630
1988	1,950	13,640	66,980	82,570	1,750	9,160	49,090	60,000
1989	2,080	21,790	56,630	80,500	3/	8,500	43,200	51,700
1990	3/	18,790	57,850	76,640	3/	5,080	46,810	51,890
1991	3/	18,370	56,950	75,320	4/	4/	4/	4/

1/ Includes equivalent pounds of dry hops held in form of extract or pellets.

2/ Includes growers' stocks held in extract form.

3/ Included in dealers' stocks to avoid disclosure of individual operations.

4/ September 1 stocks will be released on September 23, 1991.

Hops by Variety

Variety/ Crop Year	Washington						United States					
	Acres		Yield		Production		Acres		Yield		Production	
	1989	1990	1989	1990	1989	1990	1989	1990	1989	1990	1989	1990
	Acres		Pounds		1,000 Pounds		Acres		Pounds		1,000 Pounds	
Aquila	356	348	2,320	2,130	825.9	741.2	466	451	2,164	2,009	1,008.5	906.0
Banner	356	361	2,380	2,030	847.3	732.8	466	468	2,321	2,046	1,081.6	957.5
Cascade	1,297	1,270	1,980	1,630	2,568.0	2,070.1	1,297	1,270	1,980	1,630	2,568.0	2,070.1
Chinook	1,269	1,454	1,880	1,910	2,385.7	2,777.1	1,489	1,746	1,864	1,775	2,775.1	3,098.3
Cluster	6,374	6,054	2,040	1,890	13,003.0	11,442.1	6,864	6,614	2,038	1,899	13,987.9	12,562.1
Eroica	472	439	1,990	1,820	939.3	799.0	822	756	1,841	1,728	1,513.3	1,306.2
Fuggles	-	-	-	-	-	-	801	608	1,200	1,410	961.2	857.3
Galena	5,735	6,161	1,920	1,800	11,011.2	11,089.8	6,424	6,788	1,888	1,779	12,129.6	12,073.9
Mt. Hood	-	513	-	720	-	369.4	-	560	-	744	-	416.9
Nugget	2,241	2,827	1,940	1,690	4,347.5	4,777.6	3,519	4,220	1,973	1,782	6,941.8	7,521.8
Olympic	279	280	1,770	1,700	493.8	476.0	279	280	1,770	1,700	493.8	476.0
Perle	779	798	1,180	1,000	919.2	798.0	1,064	932	1,274	1,083	1,355.3	1,009.7
Tettnanger	2,410	2,362	1,040	980	2,506.4	2,314.8	2,941	2,980	1,047	1,044	3,079.9	3,112.0
Willamette	2,507	2,604	1,310	1,280	3,284.2	3,333.1	6,299	6,463	1,479	1,364	9,313.5	8,812.8
Other	261	192	940	1,150	245.3	220.8	1,817	1,327	1,165	1,262	2,116.9	1,674.2
Total	**24,336**	**25,663**	**1,782**	**1,634**	**43,376.8**	**41,941.8**	**34,548**	**35,463**	**1,717**	**1,603**	**59,326.4**	**56,854.8**

SEED CROPS

Total harvested acreage of grass and legume seed crops in the State of Washington in 1990 was 70,000 acres, down 3,000 acres from 1989. However, yield at 544 pounds per acre and production, at 381,000 cwt., increased 32 pounds per acre and 7,000 cwt., respectively. The value of production was $28.1 million, a decrease of $3.7 million from last year.

Harvested acreage for **alfalfa seed** in 1990 increased for the fourth consecutive year to 23,000 acres, 2,500 acres more than the previous year. Average yield per acre was 660 pounds, down 70 pounds from 1989. Production totaled 151,000 cwt., an increase of 2,000 cwt.. The season average price, at $123.00 per cwt., was higher than the 1989 price of $118.00 per cwt., giving a value of production of $18.6 million.

The season average price for **Kentucky bluegrass seed** plummeted to $38.00 per cwt.. This is the lowest it has been since 1975. Harvested acreage was down 2,000 acres from 1989, to 40,000 acres. Some of the decrease in acreage this year was attributed to the low price available to growers. Yield and production increased to 500 pounds per acre and 200,000 cwt., respectively. The value of production was $7.6 million compared to $11.5 million in 1989.

In previous years, **red clover seed** was estimated separately; however, due to the decrease in harvested acreage, it has been **included with "other"** grass seeds such as tall fescues, crested wheatgrass, and bromegrass. In 1990, harvested acreage of other grass seeds decreased 1,000 acres to 7,000 acres. Yield increased 80 pounds to 430 pounds per acre, and production totaled 30,000 cwt.. The season average price for other grass seeds averaged $63.00 per cwt. and the value of production was $1.9 million.

Acreage, Production, Price, and Value

Crop and Year	Acreage Harvested	Yield Per Acre	Production	Average Price Per Cwt	Value of Production
	Acres	Pounds	Cwt.	Dollars	1,000 Dollars
Alfalfa					
1986	18,000	580	104,330	101.00	10,537
1987	19,000	560	106,400	105.00	11,172
1988	19,800	660	130,000	129.00	16,770
1989	20,500	730	149,000	118.00	17,582
1990	23,000	660	151,000	123.00	18,573
Kentucky Bluegrass					
1986	24,400	440	107,360	124.00	13,313
1987	35,000	440	154,000	126.00	19,404
1988	42,500	410	176,000	114.00	20,064
1989	42,000	440	185,000	62.00	11,470
1990	40,000	500	200,000	38.00	7,600
Red Clover					
1986	3,200	460	14,720	101.00	1,487
1987	4,500	490	22,050	89.00	1,962
1988	4,100	490	20,000	111.00	2,220
1989	2,500	480	12,000	93.00	1,116
1990*	-	-	-	-	-
Other Grass					
1986	1,600	450	7,200	100.00	720
1987	4,400	500	22,000	140.00	3,080
1988	6,900	300	21,000	69.00	1,449
1989	8,000	350	28,000	58.00	1,624
1990	7,000	430	30,000	63.00	1,890
State Total					
1986	47,200	495	233,610	111.94	26,151
1987	62,900	484	304,450	116.99	35,618
1988	73,300	473	347,000	116.72	40,503
1989	73,000	512	374,000	85.01	31,792
1990	70,000	544	381,000	73.66	28,063

* Separate estimates discontinued; estimates included in "Other Grass."

Grass Seeds by County

Crop and County	1989 Acres Harvested	1989 Yield Per Acre	1989 Production	1990 Acres Harvested	1990 Yield Per Acre	1990 Production
	Acres	Pounds	Cwt.	Acres	Pounds	Cwt.
Alfalfa						
Franklin	2,200	820	18,000	2,800	640	18,000
Grant	3,500	690	24,000	3,000	600	18,000
Walla Walla	13,600	720	98,000	16,000	660	106,000
Other	1,200	750	9,000	1,200	750	9,000
Total	**20,500**	**730**	**149,000**	**23,000**	**660**	**151,000**
Kentucky Bluegrass						
Adams	3,000	500	15,000	2,700	630	17,000
Garfield	5,200	310	16,000	4,800	600	29,000
Spokane	24,400	460	112,000	23,800	450	107,000
Walla Walla	3,000	400	12,000	2,700	440	12,000
Whitman	3,400	470	16,000	3,300	580	19,000
Other	3,000	470	14,000	2,700	590	16,000
Total	**42,000**	**440**	**185,000**	**40,000**	**500**	**200,000**
Other* Grass Seeds						
Adams	1,800	200	3,600	-	-	-
Clark	-	-	-	500	300	1,500
Franklin	1,000	600	6,000	1,200	630	7,500
Lincoln	1,400	200	2,800	1,500	200	3,000
Spokane	1,700	260	4,400	1,100	270	3,000
Walla Walla	700	600	4,200	800	630	5,000
Other	1,400	500	7,000	1,900	530	10,000
Total	**8,000**	**350**	**28,000**	**7,000**	**430**	**30,000**

- Estimates included in "Other Counties".

* Separate county estimates for Red Clover discontinued; estimates included in "Other Grass Seeds" for 1990.

FRUIT

Washington is known worldwide as a high quality fruit state. There are many factors that are important in the production of fruit in Washington. The climate is ideal for many fruits with the quantity of sunlight, cool nights and an ample supply of water. The orchardists are very knowledgeable and continue to fund research for improved methods and varieties. The marketing of the fruit is probably as critical as any aspect of the industry which Washington is very well qualified and competitive.

Fruit has always been important, even in the pioneer days. Fruit trees were brought with the early settlers as one of the staples for their food needs. In the early days of 1890 to 1900, there was as much fruit west of the Cascades as the eastern part of the State. Transportation of the fruit was a limiting factor for the development of commercial production. Another limiting factor was lack of adequate irrigation. Many of the growers in the early days had little experience in either growing fruit, or with irrigation. Experience and education worked well to teach the early growers improvements in picking, packing, shipping and marketing.

The first big expansion for fruit was between 1900 and 1910 in central Washington. During this period, the State's fruit industry remained relatively the same, although it shifted from western and southeastern areas to central Washington. The largest expansion in early history was between 1910 and 1920 when the number of bearing age fruit trees reached 10.7 million. In part, this great expansion resulted from the high prices that occurred during World War I.

Apples have always been the most popular fruit produced in Washington. Even in 1890, almost 60 percent of all trees of bearing age were apples. This dropped to 57 percent of the total in 1900 as a large number of soft fruit trees reached bearing age. Apple trees comprised about 61 percent in 1910, and in 1920 accounted for three-fourths of all bearing trees in the State. With the second great period of expansion in soft fruits, the percentage of apple trees dropped to 57 percent (1930), to 47 percent (1940), and then to 43 percent in 1950. The 1986 Washington Fruit Survey showed 37.7 million total fruit trees in the State, of which 30.6 million or 81 percent were apple trees.

Washington's reputation for quality apples in justly based in large measure upon the production of Delicious apples. In 1949, the Winesap accounted for more trees than the Standard, Red, and Golden Delicious varieties combined. By 1986, however, this had shifted dramatically to the Red Delicious varieties with 22.0 million Red Delicious trees or 72 percent of the total apple trees.

Washington can be compared with other states in some of its cultural practices. About one-fourth of the fruit trees have been planted within the past 10 years. This relatively young average age along with an aggressive attitude for expansion produced a competitive industry. Trees per acre is one measure of improved cultural practices. Washington's apple average is 190 trees per ace compared to Oregon with 164, New York at 74 and Michigan with 79 trees per acre. A similar pattern is true with sweet cherries and pears. Sweet cherries average 110 trees per acre with Oregon at 65 and Michigan at 83. Pear trees per acre in Washington average 159 compared with 135 in Oregon and 95 in Michigan.

The 1990 fruit crop set yet another record for value of production. The figure of $1.0 billion eclipsed the previous high, set the year before, by over 41 percent. Individual commodities that reached new highs were apples, pears, and peaches.

Apples

The big increase in the value of Washington's fruit crop was caused by the significant rebound in apple prices bumping the value of the 1990 apple crop to a level 66 percent higher than the previous year. A surge in consumer demand in domestic and foreign markets and a decrease in production from the record 1989 crop caused improved prices.

Grapes

Washington grape growers produced 180,000 tons of all grapes for the 1990 crop which was 21 percent below the 1989 output. Concord growers, however, received a record $275 per ton for the 142,000 tons produced in 1990. The average Concord price has steadily increased each year since 1984 when the average price was $85 per ton, the lowest price in recent history.

The average price of Washington wine grapes was the second highest in the nation at $468 per ton for the 1990 crop. Chardonnay grapes still commanded the highest wine grape price in 1990 at $864 per ton, but several red varieties such as Merlot at $789 per ton and Cabernet Sauvignon at $779 per ton have steadily increased in value.

Cherries

The production of sweet cherries was down in 1990 from 1989's record production. The 37 percent drop in utilized production was due in part to June rains which damaged the crop. With supplies low, fresh market prices were up 58 percent, averaging $1,500 per ton, a new high. Washington produced 42 percent of the nation's sweet cherries in 1990.

Pears

Pear production reached new highs in 1990. Bartlett pear production was up 13 percent and production of other pears, primarily D'Anjou, was up two percent from the previous year as bearing acreage continued its increase. Washington produced 31 percent of the nation's Bartlett pears and 45 percent of the nation's other pears in 1990.

Markets

Overseas markets are becoming increasingly important for Washington fruit. Taiwan has been the number one buyer of fresh apples, with Japan the major importer of fresh sweet cherries. In recent years, there has been a growing demand for Washington fruit from the European markets of the United Kingdom, Scandinavia, the Netherlands and West Germany, and from Saudia Arabia and the United Arab Emirates. Improvements in post-harvest handling and shipping methods are helping to increase world demand and will allow Washington to remain competitive with fruit supplying countries such as New Zealand and Chile.

Washington's two major fruit growing areas are east of the Cascades, in the Yakima Valley and the Wenatchee-Okanogan area. The Columbia Basin is rapidly becoming a major force as new plantings come into production.

FRUIT & NUT CROPS

Utilized Production, Price, and Value, Washington

Crop and Year	Bearing Acreage	Yield Per Acre	Total Production	Utilized Production	Average Price	Value of Utilized Production 1/
	Acres	Tons	Tons	Tons	$/Ton	1,000 Dollars
Apples						
1986	126,000	12.55	1,580,000	1,580,000	310.00	488,400
1987	135,000	18.50	2,500,000	2,400,000	146.00	348,000
1988	142,000	13.75	1,950,000	1,950,000	260.00	505,050
1989	150,000	16.65	2,500,000	2,500,000	186.00	466,000
1990	155,000	15.50	2,400,000	2,400,000	324.00	775,650
Apricots						
1986	1,000	4.30	4,300	4,300	772.00	3,319
1987	1,100	3.55	3,900	3,900	709.00	2,765
1988	1,200	5.08	6,100	6,100	682.00	4,162
1989	1,200	1.33	1,600	1,600	1,400.00	2,236
1990	1,300	5.54	7,200	7,200	596.00	4,291
Sweet Cherries						
1986	11,900	5.25	62,500	62,500	951.00	59,437
1987	12,200	6.07	74,000	74,000	923.00	68,332
1988	12,800	4.84	62,000	62,000	983.00	60,918
1989	13,300	6.32	84,000	84,000	802.00	67,390
1990	13,600	4.85	66,000	53,000	1,180.00	62,602
Tart Cherries						
1986	-	-	-	900	631.00	568
1987	-	-	-	2,100	325.00	683
1988	-	-	-	2,600	360.00	936
1989	-	-	-	3,200	356.00	1,139
1990	-	-	-	3,700	313.00	1,158
Bartlett Pears						
1986	11,700	10.80	126,000	126,000	225.00	28,352
1987	12,100	14.10	171,000	171,000	189.00	32,322
1988	12,100	12.10	147,000	147,000	244.00	35,868
1989	12,200	12.90	157,000	157,000	258.00	40,430
1990	12,500	14.20	177,000	177,000	248.00	43,812
Other Pears						
1986	10,000	14.00	140,000	140,000	339.00	47,480
1987	10,800	15.30	165,000	165,000	215.00	35,395
1988	11,300	14.40	163,000	163,000	335.00	54,618
1989	11,600	16.60	192,000	192,000	336.00	64,596
1990	12,000	16.30	195,000	195,000	344.00	67,164

Utilized Production, Price, and Value, Washington (continued)

Crop and Year	Bearing Acreage	Yield Per Acre	Total Production	Utilized Production	Average Price	Value of Utilized Production 1/
	Acres	Tons	Tons	Tons	$/Ton	1,000 Dollars
Peaches						
1986	2,400	8.35	20,000	20,000	456.00	9,105
1987	2,500	8.60	21,500	21,500	330.00	7,076
1988	2,600	9.60	25,000	25,000	386.00	9,660
1989	2,700	8.15	22,000	22,000	510.00	11,212
1990	2,800	9.45	26,500	26,500	510.00	13,498
Prunes						
1986	1,400	6.50	9,100	9,100	366.00	3,329
1987	1,500	8.20	12,300	12,300	134.00	1,650
1988	1,600	8.44	13,500	13,500	187.00	2,521
1989	1,600	8.44	13,500	13,500	162.00	2,187
1990	1,700	8.24	14,000	14,000	166.00	2,322
Grapes, All						
1986	27,900	5.59	156,000	156,000	238.00	37,120
1987	28,200	8.85	249,500	246,000	225.00	55,356
1988	29,200	6.23	182,000	182,000	245.00	44,601
1989	29,100	7.87	229,000	229,000	302.00	69,158
1990	29,800	6.04	180,000	180,000	316.00	56,877
Filberts						
1986	400	.50	-	200	895.00	179
1987	400	.75	-	300	1,160.00	348
1988	400	.50	-	200	891.00	178
1989	360	.56	-	200	1,030.00	206
1990	350	.57	-	200	881.00	176
Other 2/						
1986	-	-	-	9,100	-	5,750
1987	-	-	-	9,000	-	3,560
1988	-	-	-	12,700	-	5,715
1989	-	-	-	13,800	-	7,450
1990	-	-	-	16,600	-	7,390
State Total						
1986	-	-	-	2,108,100	324.01	683,039
1987	-	-	-	3,105,100	178.90	555,487
1988	-	-	-	2,564,100	282.45	724,227
1989	-	-	-	3,216,300	227.59	732,004
1990	-	-	-	3,073,200	336.76	1,034,940

1/ Price based at packinghouse door and processing plant door.
2/ Includes miscellaneous fruit and nuts.
- Not available.

Utilized Production by Fruit Districts, Washington

Area and Year	Apples	Apricots	Sweet Cherries	Bartlett Pears	Other Pears	Peaches	Prunes
	Tons						
West							
1986	800	-	100	20	-	70	20
1987	1,000	-	50	20	-	70	20
1988	1,500	-	50	20	-	70	20
1989	2,000	-	50	20	-	50	20
1990	2,500	-	50	-	-	50	20
Mid-Columbia							
1986	4,400	60	1,100	4,200	7,000	550	70
1987	7,200	60	1,200	6,400	9,000	550	60
1988	7,500	50	1,000	3,900	10,500	600	60
1989	10,000	30	1,000	6,000	12,000	800	60
1990	10,500	50	900	8,000	12,900	1,000	60
Wenatchee							
1986	600,000	1,550	17,000	24,400	96,500	2,700	40
1987	1,000,000	1,900	26,500	34,500	112,000	2,800	40
1988	680,000	2,500	27,000	33,000	107,000	2,500	40
1989	991,000	1,150	29,500	33,000	131,000	2,400	100
1990	795,000	3,800	26,500	34,000	129,000	3,100	150
Yakima Valley							
1986	785,000	2,200	39,000	96,000	35,700	13,900	7,900
1987	1,125,000	1,400	40,500	127,000	42,700	15,000	10,900
1988	940,000	3,100	28,200	105,000	42,900	19,100	12,100
1989	1,118,000	300	48,200	112,000	45,900	15,200	12,200
1990	1,100,000	3,000	21,400	127,000	48,000	18,000	12,900
Columbia Basin							
1986	180,000	400	5,000	1,240	750	2,500	1,000
1987	250,000	450	5,500	3,000	1,250	2,800	1,200
1988	300,000	380	5,500	5,000	2,550	2,500	1,200
1989	350,000	80	5,000	5,800	3,000	3,200	1,000
1990	450,000	300	4,000	8,000	5,000	4,000	750
Northeast							
1986	4,000	60	200	40	50	180	20
1987	6,800	60	100	20	50	180	20
1988	6,000	50	100	20	50	150	20
1989	4,000	30	150	40	100	200	20
1990	2,000	50	100	-	100	250	20
Southeast							
1986	5,800	30	100	100	-	100	50
1987	10,000	30	150	60	-	100	60
1988	15,000	20	150	60	-	80	60
1989	25,000	10	100	140	-	150	100
1990	40,000	-	50	100	-	100	100
Total							
1986	1,580,000	4,300	62,500	126,000	140,000	20,000	9,100
1987	2,400,000	3,900	74,000	171,000	165,000	21,500	12,300
1988	1,950,000	6,100	62,000	147,000	163,000	25,000	13,500
1989	2,500,000	1,600	84,000	157,000	192,000	22,000	13,500
1990	2,400,000	7,200	53,000	177,000	195,000	26,500	14,000

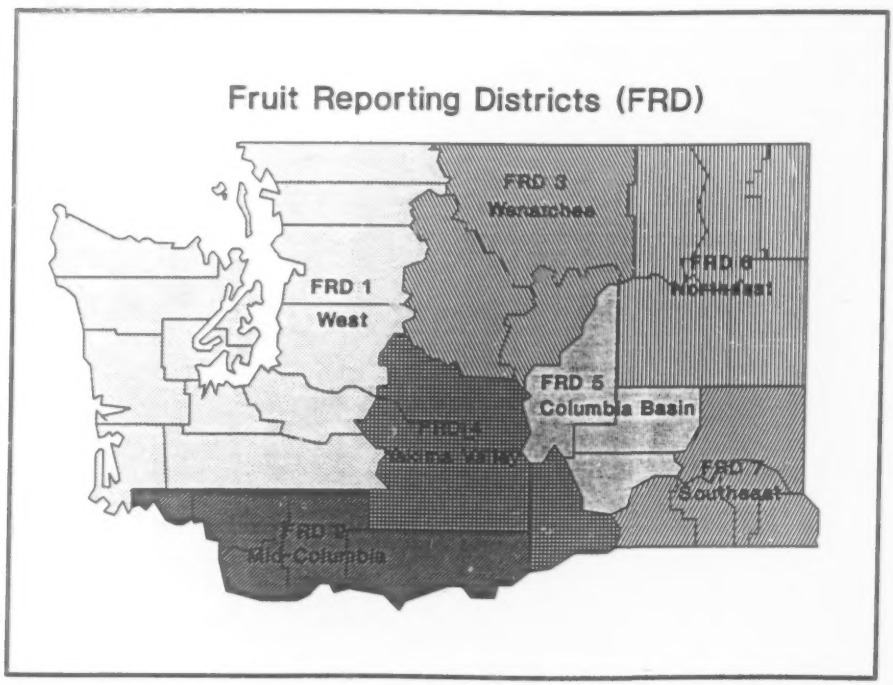
- Not applicable.

Fruit Harvesting Costs, Washington

Washington fruit harvest costs were stable or higher for all 1990 fruits except for apricots which reflected an 8 percent decline in harvest costs. Apple and other pears harvest costs were virtually the same as for the 1989 costs. Peaches and prunes had the sharpest harvest cost increase of 24 and 21 percent, respectively. Picking costs accounted for the major share of the total harvest costs with 67 and 87 percent, respectively, for apples and sweet cherries. Other harvest costs include hauling, boxes and bins, and supervision.

Fruit Harvesting Costs, Washington

Year	Apples	Apricots	Sweet Cherries	Pears		Peaches	Prunes
				Bartlett	Other		
	$/Bulk Bin			$/Ton			
1981	12.54	70.50	231.00	24.20	24.20	54.40	43.60
1982	12.90	72.70	225.00	24.20	25.10	52.00	43.50
1983	12.87	73.60	233.00	24.40	24.90	54.00	44.30
1984	13.52	76.00	232.00	22.70	23.70	57.70	49.10
1985	13.90	76.00	246.00	25.40	27.50	55.80	55.40
1986	13.61	68.00	240.00	23.90	24.00	61.00	52.00
1987	14.45	87.00	247.00	23.50	24.30	58.30	53.90
1988	15.48	74.00	220.00	24.10	25.70	60.80	48.80
1989	15.13	80.00	262.00	26.10	28.60	58.20	46.60
1990	15.07	73.60	270.00	27.20	28.70	72.00	56.20



APPLES

Washington was the leading apple producer with just under half of the national production. Production in Washington totaled 4.8 billion pounds (114.3 million boxes), 4 percent less than the record crop at 5.0 billion for 1989 and 23 percent more than the 1988 crop. The bearing acreage of apples totaled 155,000, an increase of 5,000 acres from 1989, but is only 32 percent of the national total. The Washington growers had the highest yield in the Nation with 31,000 pounds per acre compared with the next highest yielding state, California at 25,100 pounds per acre and the national average of 20,000 pounds.

Prices received for the 1990 crop were considerably better than 1989. The average price in 1990 was 16.2 cents per pound compared with the 1989 average of 9.3 cents and the record set in 1985 of 17.0 cents per pound. A record price was received for apples sold for fresh market at 21.1 cents per pound compared with the previous record high of 20.4 cents in 1985. The quantity of apples sold for the fresh market was also high at 68 percent of the total compared with 70 percent last year. The price for processing apples averaged the third highest of record at $115 per ton, nearly double the 1989 price of $66.60 per ton and comparable to the second highest price of $121 for the 1982 crop. The record high price for processing was $170 per ton for the 1978 crop.

Production, Value, and Disposition

Year	Production		Average Price Per Lb.	Value of 1/ Utilized Production	Fresh Market		Processing	
	Total	Utilized			Quantity	Price/Lb.	Quantity	Price/Ton
	Million Pounds		Cents	1,000 Dollars	Million Pounds	Cents	Million Pounds	Dollars
1981	2,760	2,760	10.9	301,530	2,070	13.4	690	70.00
1982	2,615	2,615	9.7	252,895	2,030	10.7	585	121.00
1983	3,055	3,055	11.4	348,790	2,255	13.8	800	94.40
1984	2,950	2,950	11.1	326,220	2,172	13.3	778	95.50
1985	2,050	2,050	17.0	348,740	1,590	20.4	460	105.00
1986	3,160	3,160	15.5	488,400	2,440	18.6	720	95.60
1987	5,000	4,800	7.3	348,000	3,000	10.4	1,800	39.80
1988	3,900	3,900	13.0	505,050	2,850	16.1	1,050	87.00
1989	5,000	5,000	9.3	466,000	3,500	11.9	1,500	66.60
1990	4,800	4,800	16.2	775,650	3,250	21.1	1,550	115.00

1/ Prices based at packinghouse door and processing plant door.

Processed Apple Utilization

Year	Canned		Juice		Other		Total Quantity 1/
	Quantity	Price/ Ton	Quantity	Price/ Ton	Quantity	Price/ Ton	
	Million Pounds	Dollars	Million Pounds	Dollars	Million Pounds	Dollars	Million Pounds
1981	97	87.00	430	65.00	163	73.00	690
1982	80	145.00	331	112.00	174	127.00	585
1983	99	112.00	440	85.00	261	102.00	800
1984	92	117.00	432	70.00	254	131.00	778
1985	80	129.00	236	78.00	144	134.00	460
1986	100	126.00	430	77.00	190	122.00	720
1987	150	73.80	1,400	32.80	250	58.70	1,800
1988	160	110.00	620	73.00	270	105.00	1,050
1989	245	105.00	990	51.50	265	89.60	1,500
1990	245	125.00	1,045	111.00	260	121.65	1,550

1/ Includes frozen and dried utilization.

Apples: Holdings in Refrigerated Warehouses

Date	Washington			Pacific Region 1/			United States		
	1988-89	1989-90	1990-91	1988-89	1989-90	1990-91	1988-89	1989-90	1990-91
	Million Pounds								
Sept. 30	1,350	1,800	2,500	1,460	1,902	2,588	1,858	2,261	3,005
Oct. 31	2,845	2,851	2,966	3,001	2,983	3,111	4,602	4,468	4,590
Nov. 30	2,296	2,459	2,657	2,423	2,583	2,772	3,904	3,853	4,004
Dec. 31	1,975	2,087	2,290	2,047	2,187	2,385	3,266	3,221	3,378
Jan. 31	1,666	1,689	1,890	1,723	1,813	1,965	2,660	2,572	2,695
Feb. 28	1,380	1,395	1,581	1,424	1,495	1,624	2,100	2,025	2,101
Mar. 31	1,067	986	1,245	1,094	1,049	1,278	1,546	1,400	1,570
Apr. 30	807	778	910	825	840	932	1,069	1,004	1,061
May 31	*	*	*	552	532	639	619	590	691
Jun. 30	*	*	*	320	262	373	347	284	386
Jul. 31	*	*	*	166	112	2/	175	119	2/
Aug. 31	*	*	*	4	4	2/	8	9	2/

1/ Washington, Oregon, and California.
2/ Data not available at the time of publication.
* Not published.

Refrigerated Space by Type of Warehouse, October 1

Storage	Cooler Space				Freezer Space				Total Space 1/			
	1983	1985	1987	1989	1983	1985	1987	1989	1983	1985	1987	1989
	Million Cubic Feet											
	Washington											
General Storages												
Gross Space	3.9	4.6	4.8	8.6	93	96	103	116	97	100	108	124
Usable Space	2.7	3.2	3.7	6.5	73	78	84	95	76	81	88	102
Apple Storages												
Gross Space	256	268	296	344	-	-	-	-	256	268	296	344
Usable Space	204	214	237	275	-	-	-	-	204	214	237	275
Total Storages												
Gross Space	260	272	301	352	93	96	103	116	353	368	404	468
Usable Space	207	217	241	281	73	78	84	95	280	295	325	377

1/ Total may not add due to rounding.
\- Not applicable.

Usable Cooler Capacity of Apple and Pear Storages, October 1

Storage	Washington				United States			
	1983	1985	1987	1989	1983	1985	1987	1989
	1,000 Boxes				1,000 Boxes			
Apple and Pear Storages								
Controlled Atmosphere	55,086	59,384	67,641	82,360	78,506	84,733	94,622	109,823
Regular Storage	46,824	47,639	50,849	55,004	103,193	107,486	109,912	118,811
Total	**101,910**	**107,023**	**118,490**	**137,364**	**181,699**	**192,219**	**204,534**	**228,634**

1990 Washington Grape Production

Washington growers produced 180,000 tons of all grapes for the 1990 crop which was 21 percent below the 1989 output and 28 percent less than the record 249,500 tons in 1987. Concord growers received a record price for their grapes -- $275 per ton for the 142,000 tons produced in 1990. The average Concord price has steadily increased each year since 1984 when the average was $85 per ton. Wine growers produced 38,000 tons during 1990, 5,000 tons below last year and 8,000 tons below the record 1988 output. Growers received an average of $468 per ton for the 1990 crop compared with $443 per ton for the 1989 crop. The combined all grape value of production added $56.9 million to the State's agricultural economy, second highest of record and 18 percent less than the 1989 record value of $69.2 million.

White Reisling was still the number one wine variety utilized during 1990 with 10,900 tons; however, its importance has steadily declined since the first survey. The first variety survey was conducted in 1985 when White Reisling accounted for 37 percent of the total wine grapes compared with 29 percent for the 1990 crop. Chardonnay grapes still commanded the highest price in 1990 at $864 per ton, but this was $55 per ton below the 1989 price. Generally, white variety prices have steadily declined during the 1985-88 period but have remained stable during the past two years at $383-392 per ton. The red variety average price for 1990 was $724 per ton, $56 per ton higher than the 1989 price.

The average price of Washington wine grapes was the second highest in the nation at $468 per ton for the 1990 crop. Washington is still the number two producer of premium wine grapes in the United States.

Washington Wine Grape by Variety

Variety by Color	Quantity Utilized					Average Price				
	1986	1987	1988	1989	1990	1986	1987	1988	1989	1990
	Tons					Dollars/Ton				
White Varieties										
White Riesling	10,100	12,300	15,200	13,350	10,900	460	350	181	202	219
Chardonnay	3,960	7,500	7,300	7,550	7,050	590	542	696	919	864
Chenin Blanc	3,060	3,970	4,850	4,200	3,850	530	370	207	195	210
Sauvignon Blanc	1,550	2,460	3,220	3,400	2,950	666	531	371	396	356
Semillon	1,980	2,820	3,250	2,750	2,400	594	464	245	213	244
Gewurztraminer	2,020	2,300	2,200	1,900	1,400	431	348	218	182	237
Muscat Canelli	310	820	750	450	500	625	499	401	291	293
Others	550	630	240	350	200	328	336	321	347	321
Total	**23,530**	**32,800**	**37,010**	**33,950**	**24,250**	**512**	**423**	**316**	**383**	**392**
Red Varieties										
Cabernet Sauvignon	2,530	2,470	3,520	3,950	3,450	670	600	638	742	779
Merlot	1,070	2,150	3,060	2,700	3,050	645	586	613	713	789
Pinot Noir	350	650	730	900	800	691	597	631	547	549
Lemberger	*	*	300	600	450	*	*	416	505	368
Others 1/	1,020	2,430	1,380	900	1,000	375	424	271	440	637
Total	**4,970**	**7,700**	**8,990**	**9,050**	**8,750**	**606**	**540**	**565**	**668**	**724**
State Total	**28,500**	**40,500**	**46,000**	**43,000**	**38,000**	**529**	**445**	**364**	**443**	**468**

* Included in other.
1/ Includes Pink Varieties.

Grapes: Production, Value, and Disposition 1/

Year	Production		Average Price Per Ton 1/	Value of Utilized Production	Fresh Market		Processing	
	Total	Utilized			Quantity	Price/Ton	Quantity	Price/Ton
	Tons		Dollars	1,000 Dol.	Tons	Dollars	Tons	Dollars
				Concord Grapes 2/				
1981	150,500	150,500	170	25,572	500	289	150,000	170
1982	155,900	155,900	147	22,849	700	500	155,200	145
1983	205,700	204,400	116	23,815	700	395	203,700	115
1984	150,700	150,700	85	12,754	500	377	150,200	84
1985	99,000	99,000	110	10,844	300	484	98,700	108
1986	127,500	127,500	173	22,043	200	200	127,300	173
1987	205,500	205,500	182	37,333	400	240	205,100	182
1988	136,000	136,000	205	27,857	300	280	135,700	205
1989	186,000	186,000	269	50,109	200	300	185,800	269
1990	142,000	142,000	275	39,093	200	300	141,800	275
				Wine Grapes				
1981	8,500	8,500	533	4,531	-	-	8,500	533
1982	13,000	13,000	650	8,450	-	-	13,000	650
1983	21,300	21,300	490	10,437	-	-	21,300	490
1984	17,800	17,800	455	8,099	-	-	17,800	455
1985	17,100	17,100	573	9,798	-	-	17,100	573
1986	28,500	28,500	529	15,077	-	-	28,500	529
1987	44,000	40,500	445	18,023	-	-	40,500	445
1988	46,000	46,000	364	16,744	-	-	46,000	364
1989	43,000	43,000	443	19,049	-	-	43,000	443
1990	38,000	38,000	468	17,784	-	-	38,000	468
				All Grapes				
1981	159,000	159,000	189	30,102	500	289	158,500	189
1982	168,900	168,900	185	31,299	700	500	168,200	184
1983	227,000	225,700	152	34,252	700	395	225,000	151
1984	168,500	168,500	124	20,853	500	377	168,000	123
1985	116,100	116,100	178	20,642	300	484	115,800	177
1986	156,000	156,000	238	37,120	200	200	155,800	238
1987	249,500	246,000	225	55,356	400	240	245,600	225
1988	182,000	182,000	245	44,601	300	280	181,700	245
1989	229,000	229,000	302	69,158	200	300	228,800	302
1990	180,000	180,000	316	56,877	200	300	179,800	316

1/ Prices based at packinghouse door and processing plant door.
2/ Includes minor quantities of American hybrids used primarily for juice. Processing segment is juice utilization.

APRICOTS

Apricot production in Washington rebounded from the devastated 1989 crop. Production for 1990 was 7,200 tons compared with the winter damaged crop of 1989 at 1,600 tons and the 1988 crop of 6,100 tons. The average price was $596 for the 1990 crop, down sharply from the $1,400 price received in 1989. The Washington price was also higher than the top state, California at $326 per ton.

Production, Price, and Value

Year	Production		Average Price Per Ton	Value of 1/ Utilized Production
	Total	Utilized		
	Tons		Dollars	1,000 Dol.
1981	1,300	1,300	593.00	771
1982	3,000	2,900	527.00	1,529
1983	2,900	2,900	604.00	1,751
1984	3,400	3,400	490.00	1,665
1985	2,400	2,400	628.00	1,508
1986	4,300	4,300	772.00	3,319
1987	3,900	3,900	709.00	2,765
1988	6,100	6,100	682.00	4,162
1989	1,600	1,600	1,400.00	2,236
1990	7,200	7,200	596.00	4,291

1/ Prices based at packinghouse door and processing plant door.

PEACHES

Peach production in Washington increased 20 percent during 1990 to 26,500 tons compared with 22,000 tons in 1989. Bearing acreage increased 100 acres to total 2,800 acres, but the yield per acre increased to 9.45 tons compared with 8.15 tons for 1989. The top per acre yielding state was California at 20,800 pounds and the national average is 7,520 pounds for freestone peaches.

The average price for 1990 was $510 per ton, the same as the record set in 1989. The combination of higher production and a record price resulted in a record $13.5 million value of production for peaches.

Production, Price, and Value

Year	Production		Average Price Per Ton	Value of 1/ Utilized Production
	Total	Utilized		
	Tons		Dollars	1,000 Dol.
1981	10,000	10,000	472.00	4,719
1982	13,500	13,500	448.00	6,059
1983	14,500	14,500	386.00	5,602
1984	19,000	19,000	486.00	9,239
1985	15,500	15,500	476.00	7,365
1986	20,000	20,000	456.00	9,105
1987	21,500	21,500	330.00	7,076
1988	25,000	25,000	386.00	9,660
1989	22,000	22,000	510.00	11,212
1990	26,500	26,500	510.00	13,498

1/ Prices based at packinghouse door and processing plant door.

SWEET CHERRIES

Washington was the top producer of sweet cherries with 42 percent of the National production during 1990. Total production was 66,000 tons but only 53,000 tons were utilized in the fresh market and processing segment as rains during harvest resulted in some cherries not being harvested. The bearing acreage at 13,600 has steadily increased over the years and state growers are getting the highest yield per acre at 4.85 tons.

Orchardists received a record price of $1,180 per ton for the 1990 crop. Fresh market price at $1,500 was also a record but the processing price of $310 per ton was $96 below last year and compares with record of $620 per ton for the 1978 processing price. Value of production at $62.6 million is 7 percent below last year and 8 percent less than the $68.3 million of 1987.

Production, Value, and Disposition

Year	Production		Average Price Per Ton	Value of 1/ Utilized Production	Fresh Market		Processing	
	Total	Utilized			Quantity	Price/Ton	Quantity	Price/Ton
	Tons		Dollars	1,000 Dol.	Tons	Dollars	Tons	Dollars
1981	46,400	44,400	934.00	41,479	31,800	1,134.00	12,600	430.00
1982	66,000	50,800	746.00	37,888	36,100	885.00	14,700	404.00
1983	89,000	80,900	689.00	55,726	63,500	774.00	17,400	378.00
1984	68,000	55,800	729.00	40,654	42,500	868.00	13,300	283.00
1985	37,900	35,300	1,030.00	36,527	20,200	1,430.00	15,100	506.00
1986	62,500	62,500	951.00	59,437	44,100	1,140.00	18,400	498.00
1987	74,000	74,000	923.00	68,332	49,500	1,130.00	24,500	506.00
1988	62,000	62,000	983.00	60,918	39,600	1,320.00	22,400	386.00
1989	84,000	84,000	802.00	67,390	61,300	949.00	22,700	406.00
1990	66,000	53,000	1,180.00	62,602	38,800	1,500.00	14,200	310.00

1/ Prices based at packinghouse door and processing plant door.

Processed Cherry Utilization

Year	Canned		Brined		Other		Total Quantity
	Quantity	Price/Ton	Quantity	Price/Ton	Quantity	Price/Ton	
	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons
1981	1,700	645.00	7,200	418.00	3,700	353.00	12,600
1982	2,500	703.00	7,100	361.00	5,100	316.00	14,700
1983	2,700	570.00	7,100	407.00	7,600	282.00	17,400
1984	1,800	527.00	5,600	245.00	5,900	245.00	13,300
1985	3,000	714.00	7,700	534.00	4,400	315.00	15,100
1986	2,500	575.00	12,000	471.00	3,900	531.00	18,400
1987	3,800	667.00	12,500	531.00	8,200	394.00	24,500
1988	3,900	644.00	11,900	391.00	6,600	226.00	22,400
1989	6,100	611.00	8,900	450.00	7,700	193.00	22,700
1990	1,500	604.00	4,000	420.00	8,700	208.00	14,200

BARTLETT PEARS

Washington Bartlett pear growers set a record production of 177,000 tons during 1990, surpassing the previous level established in 1944 when 172,120 tons were produced. Growers received $248 per ton, $10 less than last year's record price; but with more production, this resulted in a record $43.8 million being added to the agricultural economy.

Production, Value, and Disposition

Year	Production		Average Price Per Ton	Value of 1/ Utilized Production	Fresh Market		Processing	
	Total	Utilized			Quantity	Price/Ton	Quantity	Price/Ton
	Tons		Dollars	1,000 Dol.	Tons	Dollars	Tons	Dollars
1981	144,500	144,500	147.00	21,303	42,400	199.00	102,100	126.00
1982	141,300	141,300	154.00	21,736	44,600	199.00	96,700	133.00
1983	140,800	140,800	180.00	25,325	56,400	253.00	84,400	131.00
1984	101,000	101,000	218.00	21,996	24,500	342.00	76,500	178.00
1985	111,000	111,000	248.00	27,484	33,300	389.00	77,700	187.00
1986	126,000	126,000	225.00	28,352	39,500	363.00	86,500	162.00
1987	171,000	171,000	189.00	32,322	56,000	187.00	115,000	190.00
1988	147,000	147,000	244.00	35,868	42,000	394.00	105,000	184.00
1989	157,000	157,000	258.00	40,430	41,000	358.00	116,000	222.00
1990	177,000	177,000	248.00	43,812	43,000	352.00	134,000	214.00

1/ Prices based at packinghouse door and processing plant door.

OTHER PEARS

Washington is the leading other pear producer with over half of the National production. Orchardists set a record production during 1990 with 195,000 tons, just 2 percent greater than a year ago. A record $67.2 million was added to the agricultural economy from the 1990 winter pears.

Production, Price, and Value

Year	Production		Average Price Per Ton	Value of 1/ Utilized Production
	Total	Utilized		
	Tons		Dollars	1,000 Dol.
1981	130,800	130,800	260.00	34,049
1982	123,500	123,500	245.00	30,269
1983	138,000	138,000	171.00	23,648
1984	103,000	103,000	325.00	33,432
1985	114,000	114,000	365.00	41,642
1986	140,000	140,000	339.00	47,480
1987	165,000	165,000	215.00	35,395
1988	163,000	163,000	335.00	54,618
1989	192,000	192,000	336.00	64,596
1990	195,000	195,000	344.00	67,164

1/ Prices based at packinghouse door and processing plant door.

PRUNES

Washington prune producers harvested 14,000 tons from 1,700 acres during 1990. During the past decade, bearing acreage has ranged from 1,400 to 1,700 acres while production was between 9,100 and 18,000 tons. Orchardists received $166 per ton for the 1990 crop and the average price has ranged from $116 to $366 per ton during the past 10 years.

Production, Value, and Disposition

Year	Production		Average Price Per Ton	Value of 1/ Utilized Production	Fresh Market		Processing	
	Total	Utilized			Quantity	Price/Ton	Quantity	Price/Ton
	Tons		Dollars	1,000 Dol.	Tons	Dollars	Tons	Dollars
1981	14,600	14,600	116.00	1,688	11,200	133.00	3,400	58.20
1982	11,500	11,500	300.00	3,454	10,050	340.00	1,450	25.30
1983	14,700	14,700	161.00	2,374	12,100	189.00	2,600	33.30
1984	18,000	18,000	151.00	2,715	11,400	189.00	6,600	84.90
1985	10,200	10,200	220.00	2,240	7,200	284.00	3,000	64.90
1986	9,100	9,100	366.00	3,329	7,400	437.00	1,700	55.70
1987	12,300	12,300	134.00	1,650	7,600	164.00	4,700	86.00
1988	13,500	13,500	187.00	2,521	10,500	228.00	3,000	42.20
1989	13,500	13,500	162.00	2,187	9,700	198.00	3,800	70.10
1990	14,000	14,000	166.00	2,322	9,200	228.00	4,800	46.70

1/ Prices based at packinghouse door and processing plant door.

FILBERTS

Filbert producers harvested 200 tons of filberts with an average price of $881 per ton for the 1990 crop. After the 1962 Columbus Day storm, filbert acreage declined to the current level of 350 acres. Clark County has about half of the State's filbert trees, while the remainder are located between Seattle and the Canadian border.

Production, Value, and Disposition

Year	Utilized Production	Average Price Per Ton	Value of Utilized Production	Production		Meat Production Of Nuts Sold Shelled
				Sold In Shell	Sold Shelled	
	Tons	Dollars	1,000 Dol.	Tons		
1981	300	770.00	231	200	100	80
1982	400	677.00	271	230	170	70
1983	200	720.00	144	150	50	20
1984	200	875.00	175	120	80	30
1985	300	957.00	287	250	50	20
1986	200	895.00	179	150	50	20
1987	300	1,160.00	348	150	150	60
1988	200	891.00	178	100	100	40
1989	200	1,030.00	206	50	150	60
1990	200	881.00	176	70	130	50

VEGETABLES

The 1990 value of production for Washington vegetables was $210.3 million, 4 percent below the 1989 record of $219.6 million. Value of production in Washington has steadily increased over the years as the net worth was $100 million in the late 70's but now is over the $200 million mark. Total volume at 21.9 million cwt. was 1 percent below the record output of 22.2 million tons during 1989. Also, harvested acres has steadily increased over the past few years but is still short of the 193,310 acres harvested in 1968.

Asparagus, the number 1 vegetable crop in Washington, added $54.9 million to the agricultural economy during 1990. This is slightly below the record $55.1 million from the 1989 crop. Harvested acres at 30,000 for the 1990 crop is 2,000 acres below the record levels during 1988 and 1989. The 1990 yield at 34 cwt. per acre was 2 cwt. above the previous year but still much below the level set in 1945-46 of 42 cwt.

Sweet corn for processing was the second most valuable vegetable crop and set many records for the 1990 crop. Producers harvested a record acreage and harvested a record production for the 1990 season. Also, sweet corn growers received top price for their crop which added a record $36 million to the agricultural economy.

Green peas for processing posted a 4 percent gain in harvested acres for the 1990 crop, but this was still short of the record 90,100 harvested during 1968. Growers received $253.00 per ton which added $24 to the agricultural economy.

Storage onion acreage has steadily increased over the years and growers harvested a record 6,800 acres during 1990. A new production high of 2,992,000 cwt. was set but average price fell to $8.62 per cwt., 23 percent below last year's level. Non-storage onion acreage has declined the past 3 years as growers harvested 1,200 acres during 1990.

Vegetable Crops: Acreage, Production and Value

Crop and Year	Acreage Harvested	Yield Per Acre	Production	Average Price Per Cwt. 1/	Value of Utilized Production	Fresh Market		Processing	
						Production	Average Price Per Cwt 1/	Production	Average Price Per Cwt. 1/
	Acres	Cwt.	1,000 Cwt.	Dollars	1,000 Dol.	1,000 Cwt.	Dollars	1,000 Cwt.	Dollars
Asparagus									
1986	30,000	26	780	52.10	40,612	290	67.30	490	43.05
1987	31,000	26	806	49.90	40,257	237	63.30	569	44.40
1988	32,000	28	896	52.70	47,198	252	62.20	644	48.95
1989	32,000	32	1,024	53.80	55,074	324	73.30	700	44.75
1990	30,000	34	1,020	53.80	54,916	280	69.80	740	47.80
Carrots									
1986	5,800	415	2,407	5.10	12,270	481	17.10	1,926	2.10
1987	6,200	460	2,852	3.80	10,831	519	11.90	2,333	2.00
1988	5,600	520	2,912	5.98	17,412	678	16.80	2,234	2.70
1989	6,300	520	3,276	4.40	14,407	739	10.50	2,537	2.62
1990	6,300	490	3,087	4.86	15,001	647	13.70	2,440	2.52
Cucumbers For Pickles									
1986	1,700	180.0	306.0	8.00	2,448	-	-	306.0	8.00
1987	1,700	199.6	339.4	9.00	3,055	-	-	339.4	9.00
1988	1,400	204.4	286.2	9.35	2,676	-	-	286.2	9.35
1989	1,700	203.8	346.4	8.85	3,066	-	-	346.4	8.85
1990 3/	-	-	-	-	-	-	-	-	-
Green Peas, Proc.									
1986	47,600	34.2	1,628.0	12.55	20,431	-	-	1,628.0	12.55
1987	41,500	41.2	1,709.8	12.70	21,714	-	-	1,709.8	12.70
1988	48,200	37.4	1,802.6	11.85	21,361	-	-	1,802.6	11.85
1989	55,700	35.6	1,983.0	13.10	25,977	-	-	1,983.0	13.10
1990	57,900	32.6	1,887.6	12.65	23,878	-	-	1,887.6	12.65
Lettuce, Fresh									
1986	1,200	180	216	14.70	3,175	216	14.70	-	-
1987	1,200	200	240	14.90	3,576	240	14.90	-	-
1988	1,400	240	336	15.30	5,141	336	15.30	-	-
1989	1,400	290	406	20.00	8,120	406	20.00		
1990	1,500	280	420	18.40	7,728	420	18.40	-	-

Vegetable Crops: Acreage, Production and Value, (Continued)

Crop and Year	Acreage Harvested	Yield Per Acre	Production	Average Price Per Cwt. 1/	Value of Utilized Production	Fresh Market		Processing	
						Production	Average Price Per Cwt. 1/	Production	Average Price Per Cwt. 1/
	Acres	Cwt.	1,000 Cwt.	Dollars	1,000 Dol.	1,000 Cwt.	Dollars	1,000 Cwt.	Dollars
Onions-Non Stge.									
1986	1,300	330	429	9.55	4,097	429	9.55	-	-
1987	1,400	380	532	12.90	6,863	532	12.90	-	-
1988	1,600	400	640	10.70	6,848	640	10.70	-	-
1989	1,500	350	525	17.80	9,345	525	17.80	-	-
1990	1,200	340	408	12.60	5,141	408	12.60	-	-
Onions-Stge. 2/									
1986	4,400	420	1,848	12.90	19,673	1,848	12.90	-	-
1987	5,000	460	2,300	10.60	20,479	2,300	10.60	-	-
1988	5,600	450	2,520	9.40	19,928	2,520	9.40	-	-
1989	6,200	450	2,790	11.20	26,656	2,790	11.20	-	-
1990	6,800	440	2,992	8.62	21,145	2,992	8.62	-	-
Snap Beans-Proc.									
1986	1,200	81.6	98.0	10.10	990	-	-	98.0	10.10
1987	1,100	90.2	99.2	9.90	982	-	-	99.2	9.90
1988	800	91.4	73.2	9.65	706	-	-	73.2	9.65
1989	1,100	87.0	95.8	9.20	881	-	-	95.8	9.20
1990 3/	-	-	-	-	-	-	-	-	-
Sweet Corn-Fresh									
1986	3,200	120	384	11.10	4,262	384	11.10	-	-
1987	3,200	130	416	9.31	3,873	416	9.31	-	-
1988	3,200	130	416	13.30	5,533	416	13.30	-	-
1989	2,500	120	300	12.70	3,810	300	12.70	-	-
1990	2,100	110	231	13.80	3,188	231	13.80	-	-
Sweet Corn-Proc.									
1986	35,300	167.4	5,909.2	3.43	20,269	-	-	5,909.2	3.43
1987	44,600	180.4	8,045.8	3.36	26,994	-	-	8,045.8	3.36
1988	49,200	175.0	8,610.0	3.24	27,908	-	-	8,610.0	3.24
1989	51,200	183.8	9,410.6	3.73	35,054	-	-	9,410.6	3.73
1990	56,300	167.6	9,435.8	3.85	36,281	-	-	9,435.8	3.85
Other-Fresh									
1986	10,800	-	1,546	-	30,847	1,546	-	-	-
1987	9,200	-	1,536	-	29,885	1,536	-	-	-
1988	9,000	-	1,504	-	30,705	1,504	-	-	-
1989	8,700	-	1,480	-	31,525	1,480	-	-	-
1990	7,700	-	1,310	-	28,370	1,310	-	-	-
Other-Proc.									
1986	5,200	-	322	-	3,200	-	-	322	-
1987	5,800	-	557	-	2,555	-	-	557	-
1988	5,800	-	520	-	5,800	-	-	520	-
1989	5,300	-	524	-	5,700	-	-	524	-
1990	13,600	-	1,112	-	14,700	-	-	1,112	-
State Total									
1986	147,700		15,873.2	-	162,274	5,194	-	10,679	-
1987	151,900		19,433.2	-	171,064	5,780	-	13,653	-
1988	163,800		20,516.0	-	191,216	6,346	-	14,170	-
1989	173,600		22,160.8	-	219,615	6,564	-	15,597	-
1990	183,400		21,903.4	-	210,348	6,288	-	15,615	-

1/ Prices based at F.O.B. (shipping point) for fresh market vegetables and at processing plant door for processing vegetables.

2/ Value of production excludes quantities harvested but not sold due to shrinkage and loss in storage. (1986=323,000 cwt., 1987=368,000 cwt., 1988=400,000 cwt., 1989=410,000 cwt., 1990=539,000)

3/ Estimates are not published starting in 1990 but are included with other processing crops.

ASPARAGUS

Washington asparagus growers produced 1,020,000 cwt. during 1990. This is virtually the same as the record 1,024,000 cwt. grown in 1989. However, only 30,000 acres were harvested during 1990 compared with 32,000 harvested in 1989. Average yield per acre was 34 cwt., 2 cwt. more than the 1989 yields. Growers received $53.80 per cwt. for the 1990 crop matching the record price of 1989.

California and Washington are the top two producing states, respectively, as they accounted for 84 percent of the national supply during 1990. California's share was 43 percent while Washington accounted for 42 percent of the total supply. However, the bulk of the California crop is sold fresh market while Washington growers furnished about 70 percent of the processing segment.

Acreage, Production, and Price

Year	Acreage Harvested	Yield Per Acre	Production	Average Price Per Cwt.
	Acres	Cwt.	1,000 Cwt.	Dollars
1981	23,700	25	595	49.40
1982 1/	28,400	24	682	48.60
1983 1/	29,300	23	684	51.40
1984	29,000	25	725	51.70
1985	29,000	28	812	52.30
1986	30,000	26	780	52.10
1987	31,000	26	806	49.90
1988	32,000	28	896	52.70
1989	32,000	32	1,024	53.80
1990	30,000	34	1,020	53.80

1/ Estimates by Washington Asparagus Growers Association.

Asparagus by County

County	1989			1990		
	Acreage Harvested	Yield Per Acre	Production	Acreage Harvested	Yield Per Acre	Production
	Acres	Cwt.	Cwt.	Acres	Lbs.	Cwt.
Adams	1,000	28.0	28,000	800	30.0	24,000
Benton	800	30.0	24,000	800	30.0	24,000
Franklin	12,000	33.0	396,000	11,500	36.0	414,000
Grant	2,300	30.0	69,000	2,100	31.0	65,000
Walla Walla	3,800	30.0	114,000	3,500	32.0	112,000
Yakima	11,900	32.6	388,000	11,000	34.0	374,000
Other Co.	200	25.0	5,000	300	23.3	7,000
State Total	**32,000**	**32.0**	**1,024,000**	**30,000**	**34.0**	**1,020,000**

CARROTS

Washington carrot growers harvested a record 6,300 acres during 1990, the same level as during the previous year. The 1990 production was 3.1 million cwt., 3 percent less than the record 3.3 million cwt. produced in 1989. Average yield at 490 cwt. per acre was 30 cwt. below last year's record of 520 cwt. Value of production at $15.0 million is 4 percent more than a year ago but 14 percent below the 1988 record of $17.4 million.

Washington is the top producer of processing carrots with 28 percent of the national output for the 1990 crop. California is second with 24 percent. In terms of total production, both fresh market and processing carrots, California is by far the leader with 59 percent of the national supply. Washington accounted for 11 percent of the 1990 total production output.

Acreage, Production, and Price

Year	Acreage Harvested	Yield Per Acre	Production	Average Price Per Cwt.
	Acres	Cwt.	1,000 Cwt.	Dollars
1981	4,400	400	1,760	5.56
1982	4,800	435	2,088	3.56
1983	4,000	400	1,600	5.54
1984	4,300	425	1,828	5.99
1985	5,200	435	2,262	4.98
1986	5,800	415	2,407	5.10
1987	6,200	460	2,852	3.80
1988	5,600	520	2,912	5.98
1989	6,300	520	3,276	4.40
1990	6,300	490	3,087	4.86

Carrots by County

County	1989			1990		
	Acreage Harvested	Yield Per Acre	Production	Acreage Harvested	Yield Per Acre	Production
	Acres	Cwt.	Cwt.	Acres	Cwt.	Cwt.
Adams	100	450	45,000	-	-	-
Benton	200	450	90,000	500	530	265,000
Cowlitz	300	400	120,000	300	380	114,000
Franklin	2,000	550	1,100,000	1,900	530	1,007,000
Grant	1,600	610	976,000	1,700	540	918,000
Klickitat	300	500	150,000	100	450	45,000
Skagit	600	520	312,000	700	480	336,000
Thurston	300	420	126,000	400	380	152,000
Whatcom	600	450	270,000	200	400	80,000
Other Co.	300	290	87,000	500	340	170,000
State Total	**6,300**	**520**	**3,276,000**	**6,300**	**490**	**3,087,000**

SWEET CORN - FRESH MARKET

Fresh market sweet corn growers harvested 2,100 acres during 1990, 400 acres less than last year. Average yield of 110 cwt. per acre were obtained, which is off 10 cwt. from the 1989 average yield per acre. Producers received $13.80 per cwt. for the 1990 crop, the second highest price since 1984 when they received $15.40 per cwt.

Florida, California, and New York are the top three producing states, respectively, and account for 62 percent of the National output. Washington's share is only 1 percent of the National supply.

Acreage, Production, and Price

Year	Fresh Market			
	Acreage Harvested	Yield Per Acre	Production	Average Price Per Cwt.
	Acres	Cwt.	Cwt.	Dollars
1981	2,800	75	210,000	11.50
1982	2,900	80	323,000	11.70
1983	2,600	85	221,000	13.50
1984	2,800	105	294,000	15.40
1985	3,300	110	363,000	13.20
1986	3,200	120	384,000	11.10
1987	3,200	130	416,000	9.31
1988	3,200	130	416,000	13.30
1989	2,500	120	300,000	12.70
1990	2,100	110	231,000	13.80

Fresh Market Sweet Corn By County

County	1989			1990		
	Acreage Harvested	Yield Per Acre	Production	Acreage Harvested	Yield Per Acre	Production
	Acres	Cwt.	Cwt.	Acres	Cwt.	Cwt.
King	200	100	20,000	100	100	10,000
Pierce	300	100	30,000	300	90	27,000
Snohomish	300	120	36,000	300	90	27,000
Spokane	150	120	18,000	150	100	15,000
Thurston	50	100	5,000	50	120	6,000
Yakima	1,300	133	173,000	1,100	125	138,000
Other	200	90	18,000	100	80	8,000
State Total	2,500	120	300,000	2,100	110	231,000

SWEET CORN - PROCESSING

Washington growers of processing sweet corn set many records with the 1990 crop. First they registered the most acres to be harvested at 56,300 which produced the largest crop of 471,790 tons. Then, they received the highest price of $76.90 per ton which added a record $36.3 million to the state's agricultural economy.

Wisconsin, Minnesota and Washington are the top three processing sweet corn states, respectively, and account for 65 percent of the national production. Washington's share is 15 percent of the national output.

Acreage, Production, and Price

Year	Processing			
	Acreage Harvested	Yield Per Acre	Production	Average Price Per Ton
	Acres	Tons	Tons	Dollars
1981	41,800	7.96	332,730	64.60
1982	51,700	9.08	469,440	70.60
1983	38,300	9.12	349,300	60.70
1984	32,900	7.47	245,760	68.00
1985	38,900	8.40	326,760	68.70
1986	35,300	8.37	295,460	68.60
1987	44,600	9.02	402,290	67.10
1988	49,200	8.75	430,500	64.80
1989	51,200	9.19	470,530	74.50
1990	56,300	8.38	471,790	76.90

Processing Sweet Corn by County

County	1989			1990		
	Acreage Harvested	Yield Per Acre	Production	Acreage Harvested	Yield Per Acre	Production
	Acres	Tons	Tons	Acres	Tons	Tons
Benton	4,100	10.4	42,500	4,800	9.5	45,800
Clark	150	8.3	1,250	200	7.0	1,390
Cowlitz	1,200	6.5	7,800	1,100	6.1	6,700
Franklin	5,100	9.6	49,000	5,100	8.2	42,000
Grant	27,000	9.4	254,000	30,200	8.8	266,000
Grays Harbor	100	6.8	680	350	6.6	2,300
Kittitas	500	9.2	4,600	2,000	9.0	18,000
Klickitat	500	9.5	4,750	750	8.8	6,600
Lewis	2,000	8.9	17,900	1,100	6.5	7,200
Skagit	600	7.0	4,200	500	5.8	2,900
Walla Walla	1,300	7.7	10,050	2,400	7.4	17,700
Whatcom	650	7.0	4,550	700	6.7	4,700
Yakima	8,000	8.7	69,250	8,000	8.7	69,250
State Total	**51,200**	**9.2**	**470,530**	**56,300**	**8.4**	**471,790**

GREEN PEAS - PROCESSING

Washington green pea growers harvested 57,900 acres in 1990, 4 percent more harvested than in 1989 but average yields declined to 1.63 tons compared with 1.78 and 1.87 tons per acre during 1989 and 1988 respectively.

Wisconsin, Minnesota, and Washington are the top three producing states for processing green peas, which account for 67 percent of the national output. Washington accounted for 18 percent of the national production..

Acreage, Production, and Price

Year	Acreage Harvested	Yield Per Acre	Production	Average Price Per Ton
	Acres	Tons	Tons	Dollars
1981	59,600	1.48	88,210	203.00
1982	67,700	1.60	108,320	235.00
1983	65,600	1.49	97,740	205.00
1984	64,400	1.70	109,480	246.00
1985	61,500	1.60	98,400	240.00
1986	47,600	1.71	81,400	251.00
1987	41,500	2.06	85,490	254.00
1988	48,200	1.87	90,130	237.00
1989	55,700	1.78	99,150	262.00
1990	57,900	1.63	94,380	253.00

Processing Green Peas by County

County	1989			1990		
	Acreage Harvested	Yield Per Acre	Production	Acreage Harvested	Yield Per Acre	Production
	Acres	Tons	Tons	Acres	Tons	Tons
Columbia	1,300	.88	1,150	2,200	.59	1,300
Cowlitz	700	2.50	1,750	750	2.13	1,600
Grant	3,300	2.42	8,000	5,600	2.93	16,400
Grays Harbor	2,100	1.79	3,750	2,400	1.56	3,750
Island	400	1.88	750	250	3.12	780
Lewis	4,700	1.86	8,750	5,400	1.70	9,200
Skagit	16,300	2.30	37,500	15,500	1.67	25,900
Snohomish	3,400	2.13	7,250	3,200	1.80	5,750
Thurston	200	1.75	350	-	-	-
Walla Walla	13,300	1.06	14,150	13,800	1.29	17,800
Whatcom	5,000	2.25	11,250	3,900	1.76	6,850
Whitman	5,000	.90	4,500	4,900	1.03	5,090
State Total	55,700	1.78	99,150	57,900	1.63	94,380

LETTUCE

Washington lettuce growers produced 420,000 cwt. from 1,500 acres during 1990. They harvested 100 more acres but yield declined to 280 cwt. per acre, down 10 cwt. from the 1989 crop. However, yields during the past two years were quite exceptional, much higher than the 10-year average of 210 cwt. per acre. Lettuce price has steadily increased over the past four years; and growers received $18.40 per cwt. for the 1990 crop, $1.60 per cwt. less than the 1989 record price. Lettuce added $7.7 million to the agricultural economy during 1990 compared with $8.1 million the previous year.

California and Arizona accounts for 94 percent of the 1990 national production while Washington's share is nearly 1 percent.

Acreage, Production, and Price

Year	Acreage Harvested	Yield Per Acre	Production	Average Price Per Cwt.
	Acres	Cwt.	Cwt.	Dollars
1981	1,200	195	234,000	13.30
1982	1,200	180	216,000	11.10
1983	1,000	220	220,000	14.00
1984	1,100	210	231,000	14.60
1985	1,100	190	209,000	13.00
1986	1,200	180	216,000	14.70
1987	1,200	200	240,000	14.90
1988	1,400	240	336,000	15.30
1989	1,400	290	406,000	20.00
1990	1,500	280	420,000	18.40

Lettuce by County

County	1989			1990		
	Acreage Harvested	Yield Per Acre	Production	Acreage Harvested	Yield Per Acre	Production
	Acres	Cwt.	Cwt.	Acres	Cwt.	Cwt.
Clark	150	300	45,000	200	260	52,000
King	250	260	65,000	250	260	65,000
Pierce	900	307	276,000	900	303	273,000
Spokane	50	200	10,000	50	200	10,000
Other Co.	50	200	10,000	100	200	20,000
State Total	1,400	290	406,000	1,500	280	420,000

DRY ONIONS

Storage onion growers produced a 1990 record output for the fourth consecutive year as 2,992,000 cwt. were harvested. This was harvested from 6,800 acres, the most ever grown in Washington. Acreage yield at 440 cwt. per acre was down 10 bags from last year's crop.

Non-storage onion production at 408,000 cwt. was harvested from 1,200 acres during 1990. Growers received $12.60 per cwt. for the 1990 crop which is 29 percent below the record 1989 price of $17.80.

Separate non-storage and storage onion county estimates were published starting with the 1989 crop.

Acreage, Production, and Price

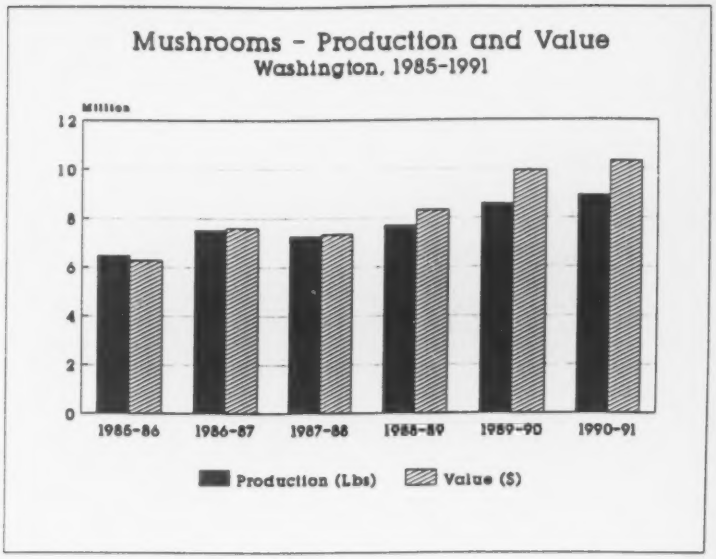
Year	Non-Storage				Storage			
	Acreage Harvested	Yield Per Acre	Production	Average Price Per Cwt	Acreage Harvested	Yield Per Acre	Production	Average Price Per Cwt.
	Acres	Cwt.	Cwt.	Dollars	Acres	Cwt.	Cwt.	Dollars
1981	800	400	320,000	16.50	3,700	400	1,480,000	14.40
1982	850	370	315,000	8.28	3,900	380	1,482,000	5.26
1983	1,200	410	492,000	8.28	3,500	440	1,540,000	14.10
1984	1,200	360	432,000	13.50	4,300	450	1,935,000	9.10
1985	1,300	300	390,000	17.40	4,300	410	1,763,000	4.97
1986	1,300	330	429,000	9.55	4,400	420	1,848,000	12.90
1987	1,400	380	532,000	12.90	5,000	460	2,300,000	10.60
1988	1,600	400	640,000	10.70	5,600	450	2,520,000	9.40
1989	1,500	350	525,000	17.80	6,200	450	2,790,000	11.20
1990	1,200	340	408,000	12.60	6,800	440	2,992,000	8.62

Dry Onions by County

Type/ County	1989			1990		
	Acreage Harvested	Yield Per Acre	Production	Acreage Harvested	Yield Per Acre	Production
	Acres	Cwt.	Cwt.	Acres	Cwt.	Cwt.
Storage Onions						
Adams	700	457	320,000	600	430	258,000
Benton	1,000	455	445,000	2,000	440	880,000
Franklin	1,000	450	450,000	1,000	450	440,000
Grant	2,900	460	1,335,000	2,800	450	1,260,000
Yakima	400	400	160,000	300	400	120,000
Other	200	400	80,000	100	340	34,000
State Total	**6,200**	**450**	**2,790,000**	**6,800**	**440**	**2,992,000**
Non-Storage Onions						
Walla Walla	1,300	355	462,000	900	353	318,000
Other	200	315	63,000	300	300	90,000
State Total	**1,500**	**350**	**525,000**	**1,200**	**340**	**408,000**

MUSHROOMS

Mushroom production in Washington for 1990 was the largest of record at 8,896 million pounds, up 331 thousand pounds from the 1989 record crop. Total fillings was 1,647,000 sq. ft., up 26,000 sq. ft. from last year. The average price per pound remained constant with last year's price to $1.16. The total value of production was a record $10.3 million, up $379,000 from last year.



Acreage, Production, Price, and Value

Year	Total Fillings	Production	Price Per Pound	Value Of Production
	1,000 Square Feet	1,000 Lbs.	Dollars	$1,000
1981-82	1,108	4,705	1.210	5,688
1982-83	1,195	4,799	1.140	5,474
1983-84	1,196	4,891	1.060	5,186
1984-85	1,640	5,417	.965	5,229
1985-86	1,844	6,485	.966	6,263
1986-87	1,916	7,501	1.010	7,576
1987-88	1,855	7,254	1.010	7,327
1988-89	1,643	7,696	1.080	8,306
1989-90	1,621	8,565	1.16	9,915
1990-91	1,647	8,896	1.16	10,294

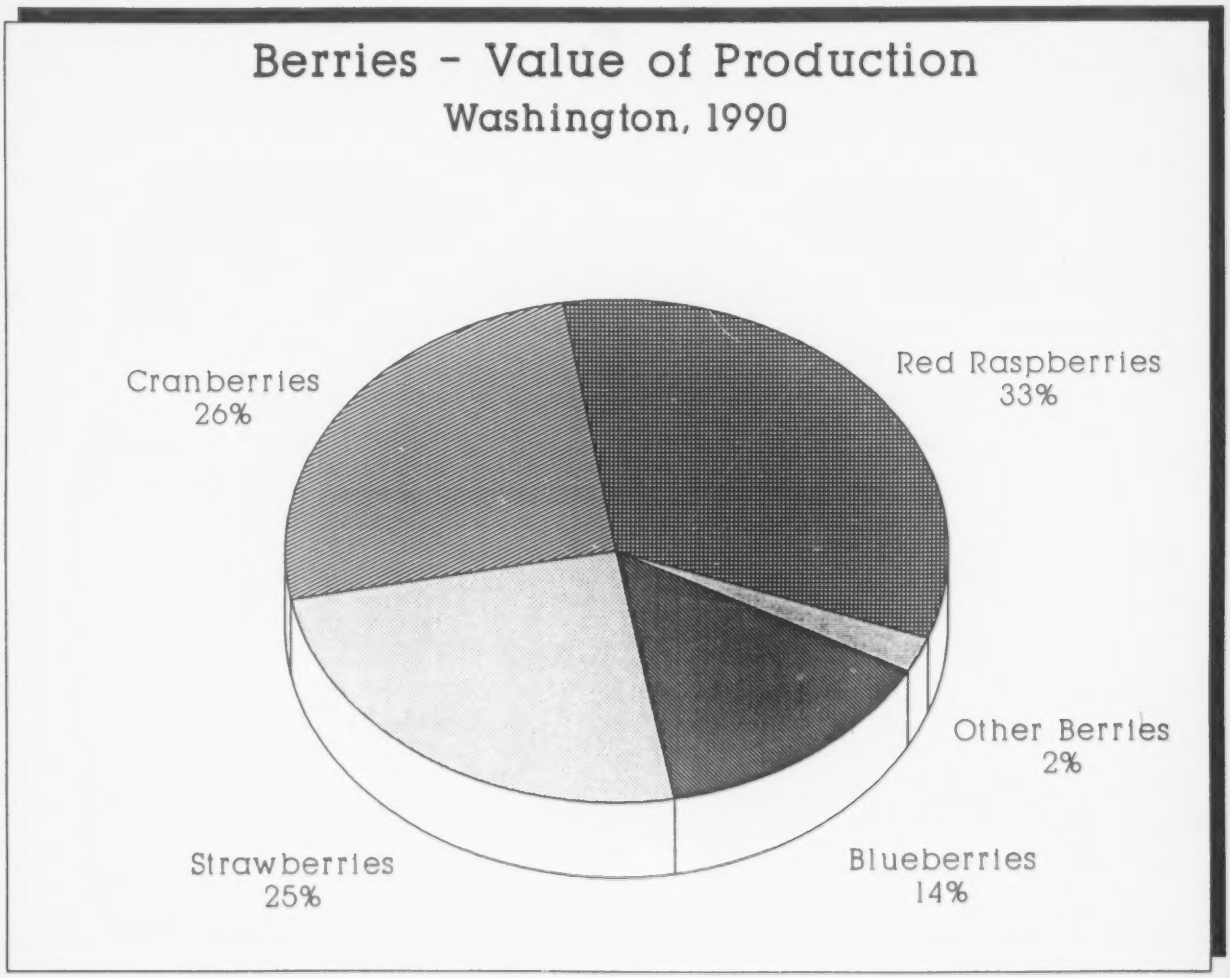
BERRIES

The value of Washington berry production totaled $26.0 million in 1990, down $7.6 million from the record high crop of 1989. This decline was mainly due to the considerable drop in the red raspberry yield and season average price. Blueberry and strawberry yields improved with respect to a year ago, and the cranberry yield was virtually unchanged.

Total harvested berry acreage was up slightly in 1990 at 8,890 acres, compared with the 8,730 acres harvested in 1989. Red raspberry acreage increased 400 acres, whereas blueberry and strawberry acreage declined and cranberry harvested acres were unchanged from 1989.

Utilized production and season average prices were down for all types of Washington berries with the exception of strawberries. The 1990 strawberry crop was 1.2 million pounds more than last year and the season average price was up 3.5 cents per pound.

Cranberry and strawberry estimates are part of the National Statistical Program. Estimates for all other berry crops are sponsored by the State. Direct comparisons can be made with Oregon which also has a State program for berry estimates.



BERRIES

Berries: Acreage, Production, Price, and Value

Crop and Year	Acreage Harvested	Yield Per Acre	Utilized Production	Average Price Per Lb.	Value of Utilized Production	Fresh Market		Processing	
						Production	Average Price Per Lb.	Production	Average Price Per Lb.
	Acres	Lbs.	1,000 Lbs.	Cents	1,000 Dol.	1,000 Lbs.	Cents	1,000 Lbs.	Cents
Cultivated Blackberries									
1986	150	3,800	570	51.1	292	170	75.0	400	41.0
1987	150	5,400	810	40.1	325	260	62.0	550	29.8
1988	150	5,500	825	48.7	402	325	74.5	500	32.0
1989	130	5,500	715	46.0	329	300	75.0	415	25.0
1990 1/	-	-	-	-	-	-	-	-	-
Blueberries									
1986	800	3,625	2,900	69.7	2,022	1,100	81.5	1,800	62.5
1987	900	7,000	6,300	68.4	4,312	2,400	81.5	3,900	60.4
1988	1,000	6,500	6,500	75.9	4,932	1,800	83.4	4,700	73.0
1989	900	7,000	6,300	68.7	4,326	2,100	82.0	4,200	62.0
1990	850	7,400	6,290	59.1	3,720	1,300	75.0	4,990	55.0
Cranberries 2/									
1986	1,200	8,330	10,000	45.3	4,530	4,620	-	5,340	-
1987	1,300	10,000	13,000	45.0	5,850	1,680	-	11,150	-
1988	1,300	10,380	13,500	44.9	6,062	1,920	-	11,480	-
1989	1,400	11,140	15,600	42.8	6,677	2,250	-	13,250	-
1990	1,400	11,070	15,500	42.7	6,619	-	-	-	-
Black Raspberries									
1986	100	700	70	165.7	116	14	170.0	56	165.0
1987	100	1,100	110	50.4	55	23	55.0	87	49.2
1988	80	1,300	104	51.9	54	20	100.0	84	41.0
1989 3/	-	-	-	-	-	-	-	-	-
Red Raspberries									
1986	3,300	4,200	13,860	75.8	10,509	1,040	86.0	12,820	75.0
1987	3,600	6,400	23,040	52.6	12,109	1,300	93.6	21,740	50.1
1988	4,000	6,300	25,200	53.5	13,482	1,200	83.5	24,000	52.0
1989	4,200	6,900	28,980	56.1	16,269	1,100	85.0	27,880	55.0
1990	4,600	5,000	23,000	37.4	8,600	1,000	90.0	22,000	35.0
Strawberries									
1986	2,800	5,000	14,000	46.4	6,500	2,000	55.0	12,000	45.0
1987 4/	2,500	9,600	24,000	34.1	8,180	2,500	52.0	21,500	32.0
1988	2,400	9,200	22,100	30.9	6,838	2,500	54.0	19,600	28.0
1989	1,900	6,000	11,400	47.7	5,440	4,000	62.0	7,400	40.0
1990	1,800	7,000	12,600	51.2	6,446	2,500	72.0	10,100	46.0
Other Berries									
1986	110	-	180	-	108	-	-	-	-
1987	160	-	770	-	275	-	-	-	-
1988	180	-	1,050	-	490	-	-	-	-
1989	200	-	1,260	-	517	-	-	-	-
1990	240	-	1,272	-	598	-	-	-	-
State Total									
1986	8,460	-	41,580	-	24,077	-	-	-	-
1987	8,710	-	68,030	-	31,106	-	-	-	-
1988	9,110	-	69,279	-	32,260	-	-	-	-
1989	8,730	-	64,255	-	33,558	-	-	-	-
1990	8,890	-	58,662	-	25,983	-	-	-	-

1/ Estimates discontinued in 1990. Included with "Other Berries."
2/ Utilized Production includes berries lost because of dehydration and berry breakdown after delivery: 1986=40,000 lbs.; 1987=170,000 lbs.; 1988=100,000 lbs.; 1989=100,000 lbs.; 1990=100,000 lbs.
3/ Estimates discontinued in 1989. Included with "Other Berries".
4/ Excludes 50,000 cwt. not harvested because of market conditions.
- Not Available.

STRAWBERRIES

The 1990 season brought another year of declining strawberry acreage for Washington. Only 1,800 acres were harvested in 1990, the lowest acreage on record (1918). However, the average yield for the State was 7,000 pounds per acre, 1,000 pounds per acre higher than the previous year's average yield of 6,000 pounds per acre.

Production totaled 12.6 million pounds. At this level, the 1990 crop was up 1.2 million pounds from the 1989 crop. Eighty percent of the crop went to processors, compared with sixty-five percent of the crop going to processors in 1989. The season average price was strong at 51.2 cents per pound, 3.5 cents higher than last year. The 1990 value of production totaled $6.4 million, $1.0 million more than 1989, and the only berry crop valued higher than a year ago.

Acreage, Production, and Price

Year	Acreage Harvested	Yield Per Acre	Utilized Production	Average Price Per Lb.
	Acres	Lbs.	1,000 Lbs.	Cents
1981	2,800	6,000	16,800	38.3
1982	3,000	6,200	18,600	43.4
1983	3,100	6,200	19,200	40.5
1984	3,000	7,000	21,000	25.8
1985	3,000	7,100	21,300	32.7
1986	2,800	5,000	14,000	46.4
1987	2,500	9,600	24,000	34.1
1988	2,400	9,200	22,100	30.9
1989	1,900	6,000	11,400	47.7
1990	1,800	7,000	12,600	51.2

Strawberries by County

County	1989			1990		
	Acreage Harvested	Yield	Production	Acreage Harvested	Yield	Production
	Acres	Lbs.	1,000 Lbs.	Acres	Lbs.	1,000 Lbs.
Clallam	30	7,000	210	40	8,500	340
Clark	60	5,000	300	20	7,000	140
King	120	5,500	660	90	6,000	540
Kitsap	30	6,000	180	20	3,500	70
Lewis	50	4,400	220	30	4,000	120
Pierce	220	4,500	990	240	8,000	1,920
Skagit	600	8,000	4,800	550	6,000	3,300
Snohomish	160	7,000	1,120	150	5,200	780
Thurston	60	8,000	480	60	9,000	540
Whatcom	400	4,000	1,600	450	9,000	4,050
Spokane	60	4,000	240	70	4,000	280
Franklin	60	5,000	300	40	7,000	280
Other Counties	50	6,000	300	40	6,000	240
State Total	**1,900**	**6,000**	**11,400**	**1,800**	**7,000**	**12,600**

RED RASPBERRIES

Harvested acreage of red raspberries set a State record high in 1990 at 4,600 acres, 100 acres more than the previous record high set in 1949, and 400 acres more than 1989. However, with yields averaging only 5,000 pounds per acre, 1,900 pounds less than last year, production was well off the 1989 record high 29.0 million pounds. The 1990 crop totaled only 23.0 million pounds, 6.0 million pounds less than last year.

Unfortunately, the drop in production was coupled with a sharp decline in the season average price. In 1990, red raspberry growers received 37.4 cents per pound, 18.7 cents less than the previous year. Consequently, the value of the 1990 crop, at $8.6 million, was $7.7 million less than the value of the 1989 crop.

Fresh market production, at 1.0 million pounds, was at a level fairly consistent with the previous five years. Processing totaled 22.0 million pounds, or ninety-six percent of production.

Acreage, Production, and Price

Year	Acreage Harvested	Yield Per Acre	Utilized Production	Average Price Per Lb.
	Acres	Lbs.	1,000 Lbs.	Cents
1981	3,000	4,750	14,250	52.0
1982	3,100	5,700	17,670	67.3
1983	3,000	5,800	17,400	43.0
1984	3,000	5,450	16,350	49.2
1985	3,200	5,250	16,800	56.1
1986	3,300	4,200	13,860	75.8
1987	3,600	6,400	23,040	52.6
1988	4,000	6,300	25,200	53.5
1989	4,200	6,900	28,980	56.1
1990	4,600	5,000	23,000	37.4

Red Raspberries by County

County	1989			1990		
	Acreage Harvested	Yield	Production	Acreage Harvested	Yield	Production
	Acres	Lbs.	1,000 Lbs.	Acres	Lbs.	1,000 Lbs.
Clallam	80	5,250	420	-	-	-
Clark	420	6,150	2,583	480	4,800	2,304
Cowlitz	100	6,000	600	-	-	-
King	50	5,500	275	-	-	-
Kitsap	40	5,000	200	-	-	-
Lewis	40	4,000	160	-	-	-
Pierce	460	6,900	3,174	440	5,300	2,332
Skagit	510	6,900	3,519	560	5,000	2,800
Snohomish	200	4,200	840	-	-	-
Spokane	40	4,300	172	-	-	-
Whatcom	2,210	7,600	16,797	2,500	5,400	13,500
Yakima	30	5,000	150	-	-	-
Other Counties	20	4,500	90	420	3,010	1,264
State Total	**4,200**	**6,900**	**28,980**	**4,600**	**5,000**	**23,000**

- Combined to Other Counties.

BLUEBERRIES

Blueberry growers had a fairly good year in 1990. They harvested 850 acres, only 50 acres less than last year, and 150 acres less than the record high 1,000 acres harvested in 1988. However, yields improved over a year ago with a State average of 7,400 pounds per acre, 400 pounds higher than 1989 and only 600 pounds off the record high yield of 8,000 pounds per acre in 1983. Production totaled 6.29 million pounds, only 10,000 pounds less than last year.

Blueberries contributed $3.72 million dollars to the agricultural economy of Washington in 1990, compared with $4.33 million dollars in 1989. The decline in the crop value was mainly due to a drop of 9.6 cents per pound in the season average price. Nearly eighty percent of the crop was processed, whereas the remaining twenty percent was sold on the fresh market.

Acreage, Production, and Price

Year	Acreage Harvested	Yield Per Acre	Utilized Production	Average Price Per Lb.
	Acres	Lbs.	1,000 Lbs.	Cents
1981	800	5,750	4,600	60.5
1982	900	6,800	6,120	70.0
1983	900	8,000	7,200	64.4
1984	800	6,000	4,800	49.8
1985	800	6,875	5,500	62.9
1986	800	3,625	2,900	69.7
1987	900	7,000	6,300	68.4
1988	1,000	6,500	6,500	75.9
1989	900	7,000	6,300	68.7
1990	850	7,400	6,290	59.1

Blueberries by County

County	1989			1990		
	Acreage Harvested	Yield	Production	Acreage Harvested	Yield	Production
	Acres	Lbs.	1,000 Lbs.	Acres	Lbs.	1,000 Lbs.
Clark	120	9,000	1,080	120	8,200	984
King	40	3,000	120	-	-	-
Lewis	120	4,900	588	-	-	-
Pierce	50	5,000	250	-	-	-
Skagit	70	5,400	378	-	-	-
Snohomish	40	4,900	196	-	-	-
Thurston	120	6,500	780	130	7,100	923
Whatcom	320	8,900	2,848	300	9,400	2,820
Other Counties	20	3,000	60	300	5,210	1,563
State Total	**900**	**7,000**	**6,300**	**850**	**7,400**	**6,290**

- Combined to Other Counties.

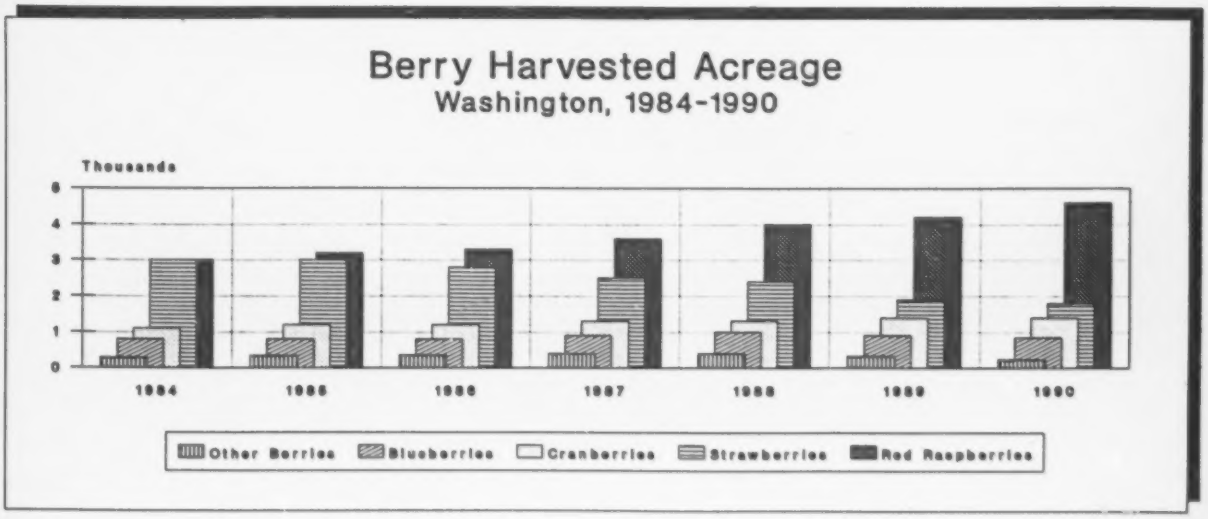
CRANBERRIES

Cranberry acreage in Washington was unchanged in 1990, with 1,400 acres harvested, the same as the record high for the State set in 1989. Cranberry bogs yielded 110.7 barrels per acre, compared with 111.4 barrels per acre in 1989, and 103.8 barrels per acre in 1988. Washington's record yield was set in 1968, at 162.0 barrels per acre.

Washington cranberry production for 1990 totaled 155 thousand barrels, only 1 thousand barrels less than last year, and 7 thousand barrels off the State record crop of 162 thousand barrels set in 1962. Based on 1989 prices, the value of the 1990 crop is expected to be slightly less than the 1989 crop of $6.68 million. The State record for crop value was set in 1985 at $8.21 million when prices were very strong at $55.50 per barrel.

Acreage, Production, and Price

Year	Acreage Harvested	Yield Per Acre	Utilized Production	Average Price Per Lb.
	Acres	Lbs.	1,000 Lbs.	Cents
1981	1,100	11,730	12,900	41.7
1982	1,100	8,360	9,200	47.1
1983	1,100	11,360	12,500	52.5
1984	1,100	9,360	10,300	55.4
1985	1,200	12,330	14,800	55.5
1986	1,200	8,330	10,000	45.3
1987	1,300	10,000	13,000	45.0
1988	1,300	10,380	13,500	44.9
1989	1,400	11,140	15,600	42.8
1990	1,400	11,070	15,500	42.7



LIVESTOCK AND POULTRY
General Information

The Washington Agricultural Statistics Service has made many adjustments in survey techniques and estimating procedures to keep abreast of changes in agriculture and to satisfy increased data needs, especially in the livestock industry. For years, surveys consisted of questionnaires mailed to informed livestock and poultry producers, asking about livestock inventories, marketings, death losses, and egg production. Today, scientific probability surveys are used to select a sample of producers to be asked specific questions about livestock and poultry on their farms and ranches.

Basic requirements for livestock and poultry probability surveys are a suitable sampling frame, which includes all producers, and a method of selecting a sample from this frame with known probabilities. Probability sample surveys and estimating procedures have the property of being unbiased and can provide measures of precision and reliability to the resulting survey estimate. Many questionnaires are still mailed, but farm operators not responding by mail are phoned or personally interviewed, so that the total sample selected is represented.

The value of production for all livestock, dairy, and poultry reached $1.25 billion in 1990, up 11 percent from the previous year. Sales for two items alone, milk and cattle, contributed 87 percent to the total value of production. The value of most items including livestock, dairy, and poultry increased over last year except mink, sheep, wool, and culled layers.

Washington farm operators and agricultural service firms have voluntarily supplied the data needed to compile the many livestock and poultry estimates. To these people, we all owe a special debt of gratitude.

We hope the livestock and poultry statistics in the following section will be useful and answer many questions about Washington agriculture.

Value of Production, Washington

Commodity	1986	1987	1988	1989	1990	1990 % of Total
			$1,000			%
Milk	468,980	474,991	495,851	559,210	603,661	48.2
All Cattle	294,337	325,594	401,461	402,172	480,836	38.4
Eggs	55,577	48,211	55,402	79,131	79,472	6.4
Chickens, Broilers	35,015	35,751	40,862	50,508	50,866	4.1
All Hogs and Pigs	7,227	9,268	8,717	9,411	11,581	1.0
Mink	8,085	11,325	9,219	6,198	4,344	.3
All Sheep and Lambs	3,376	3,376	3,715	3,956	2,906	.2
Honey	1,728	1,815	1,405	1,449	2,068	.2
Chickens, Layers	1,034	1,094	799	855	266	-
Wool	320	482	627	668	387	-
Minor Livestock and Poultry	10,635	12,594	13,790	14,086	14,992	1.2
Total	**886,314**	**924,501**	**1,031,848**	**1,127,644**	**1,251,379**	**100**

Inventory and Value, January 1

Species and Year	Washington			United States		
	Inventory	Value		Inventory	Value	
		Per Head	Total		Per Head	Total
	1,000 Head	Dollars	1,000 Dollars	1,000 Head	Dollars	1,000 Dollars
All Cattle and Calves						
1987	1,300	485.00	630,500	102,118	407.00	41,567,085
1988	1,290	610.00	786,900	99,622	523.00	52,147,845
1989	1,300	665.00	864,500	98,065	580.00	56,907,654
1990	1,330	695.00	924,350	98,162	614.00	60,285,432
1991	1,340	735.00	984,900	99,436	653.00	64,900,175
All Hogs and Pigs 1/						
1987	50	111.00	5,550	50,920	91.90	4,679,398
1988	55	84.00	4,620	54,620	76.10	4,158,300
1989	53	69.00	3,657	55,469	66.30	3,677,751
1990	56	92.50	5,180	53,821	79.10	4,255,785
1991	56	91.00	5,096	54,562	85.40	4,657,391
All Sheep and Lambs						
1987	59	75.50	4,455	10,334	75.70	799,254
1988	72	78.50	5,652	10,784	90.00	984,961
1989	74	76.50	5,661	10,858	82.40	894,912
1990	83	85.00	7,055	11,363	79.30	901,545
1991	81	82.00	6,642	11,200	65.60	734,868
All Chickens 1/ 2/						
1987	5,700	1.60	9,120	369,131	1.87	690,818
1988	6,005	1.60	9,608	377,727	1.87	706,131
1989	6,085	1.65	10,040	356,105	2.04	726,442
1990	5,826	2.00	11,652	356,234	2.16	770,822
1991	6,429	2.00	12,858	351,775	2.29	805,831
Total Value -- All Species 2/						
1987			649,625			47,736,555
1988			806,780			57,997,237
1989			883,858			62,206,759
1990			948,237			69,555,359
1991			1,009,496			71,098,265

1/ December 1 of previous year.
2/ Excludes broilers.

CATTLE AND CALVES

Cattle and calves were ranked third in value of production among the principal agricultural commodities produced in Washington during 1990. The value of production was again at a record high $480.8 million for 1990, surpassing the previous year's record of $402.2 million. The increased inventory and high beef prices held value of production at the record high level.

The January 1, 1991 inventory of all cattle and calves, 1,340,000 head, was up 1 percent from the previous year. This continues the 4-year cycle of increasing inventory numbers. Milk cows and milk cow replacement heifers led in the inventory increase with a combined 24,000 head followed with 3,000 more bulls. Offsetting were decreases in other heifers and steers over 500 pounds and calves less than 500 pounds. Beef cows and beef vow replacement heifers held unchanged.

Even though the all cattle and calf inventory increased, farm numbers declined by an estimated 1,000 farms.

Inventory on Farms by Class, January 1

Class	1987	1988	1989	1990	1991
	1,000 Head				
Cows and Heifers that have Calved:					
Beef Cows	392	354	359	375	375
Milk Cows	208	216	216	225	241
Total	**600**	**570**	**575**	**600**	**616**
Heifers, 500 pounds and over:					
For Beef Cow Replacement	75	72	83	82	82
For Milk Cow Replacement	80	80	104	102	110
Other Heifers	103	133	105	117	115
Total	**258**	**285**	**292**	**301**	**307**
Steers, 500 pounds and over	209	233	233	231	230
Bulls, 500 pounds and over	23	22	25	24	27
Calves, less than 500 pounds	210	180	175	174	160
All Cattle and Calves	**1,300**	**1,290**	**1,300**	**1,330**	**1,340**
Number of Cattle Operations 1/	**21,000**	**21,000**	**22,000**	**21,000**	**2/**
Number of Beef Cow Operations 1/ 3/	**16,000**	**16,000**	**16,000**	**15,000**	**2/**

1/ Any place having one or more head on hand at any time during the year.
2/ Available February 1992.
3/ Included in cattle operations.

Balance Sheet

Year	Inventory January 1	Calf Crop	Inship-ments	Marketings 1/		Farm Slaughter 2/	Deaths		Inventory Following January 1
				Cattle	Calves		Cattle	Calves	
	1,000 Head								
1986	1,460	540	167	635	117	37	28	50	1,300
1987	1,300	525	213	545	100	33	25	45	1,290
1988	1,290	530	310	657	80	21	27	45	1,300
1989	1,300	520	230	590	55	15	25	35	1,330
1990	1,330	530	285	668	60	17	25	35	1,340

1/ Excludes interfarm sales within the State.
2/ Excludes custom slaughter for farmers at commercial establishments.

Production and Income

Year	Production 1/	Marketings 2/	Average Price Per Cwt.		Value of:			
			Cattle	Calves	Production	Cash Receipts	Home Consumption	Gross Income
	1,000 Pounds		Dollars		1,000 Dollars			
1986	553,260	737,980	53.20	52.90	294,337	392,552	24,437	416,989
1987	532,580	633,250	61.00	76.00	325,594	388,458	24,700	413,158
1988	610,210	781,060	65.30	84.80	401,461	513,113	20,862	533,975
1989	589,010	701,200	67.90	82.30	402,172	478,261	13,045	491,306
1990	652,510	810,020	73.30	88.60	480,836	596,973	17,012	613,985

1/ Adjustments made for changes in inventory and for inshipments.
2/ Excludes custom slaughter for use on farms where produced and interfarm sales within the State.

Commercial Cattle Slaughter

Year and Month	Washington			United States 1/		
	Head	Liveweight		Head	Liveweight	
		Per Head	Total		Per Head	Total
	1,000	Pounds	1,000 Pounds	1,000	Pounds	1,000 Pounds
1990 January	67.6	1,184	80,097	2,853.0	1,144	3,263,940
February	59.3	1,196	70,957	2,501.1	1,141	2,854,300
March	60.4	1,195	72,171	2,761.3	1,133	3,129,790
April	65.1	1,189	77,424	2,618.6	1,137	2,977,165
May	74.7	1,159	86,631	2,993.4	1,109	3,319,039
June	77.2	1,207	93,147	2,936.2	1,117	3,278,932
July	71.3	1,176	83,891	2,861.4	1,125	3,217,756
August	2/	2/	2/	2,984.0	1,144	3,412,527
September	2/	2/	2/	2,616.0	1,148	3,001,939
October	2/	2/	2/	2,963.2	1,149	3,404,885
November	2/	2/	2/	2,701.0	1,144	3,089,450
December	2/	2/	2/	2,453.3	1,145	2,808,655
1986	928.2	1,144	1,061,971	37,288.3	1,100	41,031,617
1987	849.8	1,153	979,978	35,646.9	1,105	39,386,808
1988	911.2	1,178	1,073,808	35,078.9	1,120	39,293,886
1989	843.2	1,170	986,203	33,917.2	1,134	38,466,658
1990	2/	2/	2/	33,242.2	1,136	37,758,377

1/ States with unpublished data are included in U.S. total.
2/ Not published to avoid disclosing individual operations.

Cattle on Feed, Placements and Marketings

Year/ Quarter	Cattle & Calves on Feed				Previous Quarter		
	Total All	Steers	Heifers	Cows & Others	Placements	Marketings	Other Disappearance
	1,000 Head						
1986							
Jan.	198	125	73	0	115	118	3
Apr.	161	96	65	0	108	143	2
Jul.	144	86	57	1	108	122	3
Oct.	166	102	64	0	99	75	2
1987							
Jan.	138	94	44	0	91	116	3
Apr.	138	87	51	0	98	96	2
Jul.	151	99	52	0	102	87	2
Oct.	197	120	77	0	157	109	2
1988							
Jan.	198	117	80	1	127	124	2
Apr.	172	106	66	0	107	129	4
Jul.	170	107	63	0	110	111	1
Oct.	201	127	73	1	153	120	2
1989							
Jan.	190	127	63	0	120	124	7
Apr.	163	93	70	0	80	102	5
Jul.	156	96	60	0	101	105	3
Oct.	186	109	77	0	147	115	2
1990							
Jan.	170	93	77	0	102	114	4
Apr.	165	99	66	0	106	106	5
Jul.	145	83	62	0	84	102	2
Oct.	175	105	70	0	130	99	1
1991							
Jan.	185	111	73	1	124	109	5
Apr.	178	111	67	0	98	93	12
Jul.	184	118	66	0	107	98	3

Cattle on Feed by Weight Groups

Year/ Quarter	Steers and Steer Calves					Heifers and Heifer Calves			
	Under 500 Lbs	500-699 Lbs	700-899 Lbs	900-1,099 Lbs	1,100+ Lbs	Under 500 Lbs	500-699 Lbs	700-899 Lbs	900+ Lbs
	1,000 Head								
1986									
Jan.	0	5	25	59	36	0	6	22	45
Apr.	0	2	25	48	21	0	5	30	30
Jul.	0	3	21	43	19	0	2	20	35
Oct.	0	3	25	45	29	0	10	31	23
1987									
Jan.	0	13	32	37	12	0	7	23	14
Apr.	0	6	37	36	8	0	13	27	11
Jul.	0	3	32	53	11	0	4	30	18
Oct.	0	1	46	54	19	0	12	34	31
1988									
Jan.	0	8	38	56	15	0	7	35	38
Apr.	0	5	39	43	19	0	7	32	27
Jul.	0	4	24	44	35	0	4	23	36
Oct.	0	11	37	55	24	0	11	37	25
1989									
Jan.	0	9	45	57	16	0	6	24	33
Apr.	0	3	30	47	13	0	5	33	32
Jul.	0	3	27	40	26	0	3	26	31
Oct.	0	5	36	44	24	0	9	39	29
1990									
Jan.	0	5	21	39	28	0	7	30	40
Apr.	0	7	41	34	17	0	10	34	22
Jul.	0	2	18	36	27	0	4	23	35
Oct.	0	9	32	40	24	1	8	28	33
1991									
Jan.	0	14	27	42	28	0	11	23	39
Apr.	0	4	40	47	20	0	3	33	31
Jul.	0	1	25	50	42	0	2	18	46

Dairy
General Information

The value of milk production was ranked second among Washington's forty principal agricultural commodities for 1990 at $603.7 million, an increase of $44.5 million from 1989, and a new record high for the State. When compared with last year, 1990 milk production, at 4.4 billion pounds, increased 300 million pounds, and the average price, at $13.73 per hundred weight (cwt.), was up 8 cents per cwt.

Washington's dairy industry is centered in western Washington. Yakima county in eastern Washington continues to grow as a dairy area as well.

Milk Production, Utilization, Marketing, and Value

Production and Use	Unit	1986	1987	1988	1989	1990
Production And Utilization						
Production of milk:						
Total milk produced on farms	Mil. Lbs.	3,762	3,763	3,966	4,097	4,398
Milkfat produced	Mil. Lbs.	139	139	148	152	161
Percentage of milkfat	Percent	.70	3.69	3.72	3.71	3.67
Utilization:						
Milk Marketed by Producers:						
Sold to plants and dealers as whole milk 1/	Mil. Lbs.	3,582	3,570	3,766	3,926	4,208
Sold directly to consumers	Mil. Lbs.	155	172	176	150	164
Milk used where produced:						
Fed to calves	Mil. Lbs.	21	17	20	17	22
Used by farm household	Mil. Lbs.	4	4	4	4	4
Marketings						
Milk Marketed by Producers:						
Sold to plants and dealers:						
Whole milk sold 1/	Mil. Lbs.	3,582	3,570	3,766	3,926	4,208
Price per Cwt.	Dollars	12.10	12.20	12.00	13.30	13.30
Cash receipts	1,000 Dol.	433,422	435,540	451,920	522,158	559,664
Sold Directly to Consumers:						
Quantity	1,000 Qts.	72,093	80,000	81,860	69,767	76,279
Price per quart	Cents	45	46	50	49	53
Cash receipts	1,000 Dol.	32,442	36,800	40,930	34,186	40,428
Total Marketings:						
Milk Utilized	Mil. Lbs.	3,737	3,742	3,942	4,076	4,372
Price Per Cwt. of milk	Dollars	12.47	12.62	12.50	13.65	13.73
Price per pound milkfat	Dollars	3.37	3.42	3.36	3.68	3.74
Total cash receipts	1,000 Dol.	465,864	472,340	492,850	556,344	600,092
Farm Use						
Value of milk used where produced 2/	1,000 Dol.	3,116	2,651	3,001	2,866	3,569
Total Value of Milk Produced	**1,000 Dol.**	**468,980**	**474,991**	**495,851**	**559,210**	**603,661**
Number of operations with milk cows	**Number**	**3,200**	**3,000**	**3,000**	**3,000**	**3,000**

1/ Includes the equivalent amounts of milk for cream sold to plants and dealers.
2/ Includes value of milk fed to calves and milk used by farm household.

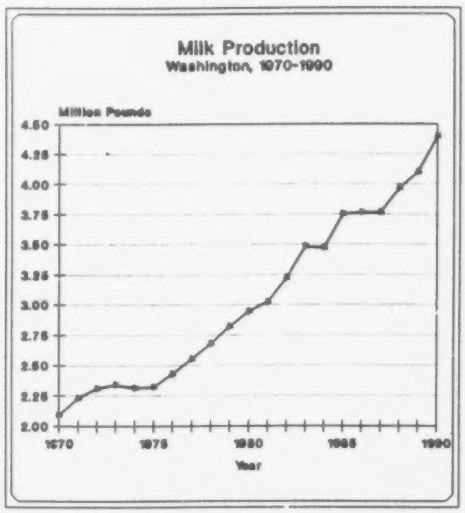
MILK COWS AND MILK PRODUCTION

Washington milk production totaled 4.4 billion pounds in 1990, a new record high for the State, and 300 million more than last year. The annual average milk production per cow was 18,557 pounds, the second highest in the Nation, and more than 300 pounds above a year ago.

The number of milk cows on Washington farms ranged from 230 thousand in January 1990 to 241 thousand in December 1990. The average number of milk cows for the year was 237 thousand, 12 thousand more than the annual average of 225 thousand milk cows for 1989, but well off the record high State herd of 380 thousand set during 1943-1945.

Milk Cows on Farms

Month	1986	1987	1988	1989	1990
	1,000 Head				
January	226	213	216	223	230
February	223	214	218	223	232
March	223	214	220	222	234
April	219	213	221	225	235
May	218	215	222	227	238
June	215	221	223	228	239
July	213	218	222	227	240
August	209	211	223	225	240
September	206	215	225	224	240
October	206	216	223	226	238
November	205	216	221	225	238
December	208	220	221	225	241
Average	**214**	**216**	**221**	**225**	**237**



Milk Production per Cow 1/

Month	1986	1987	1988	1989	1990
	Pounds				
January	1,420	1,425	1,480	1,490	1,545
February	1,320	1,305	1,400	1,360	1,400
March	1,485	1,465	1,510	1,535	1,575
April	1,490	1,475	1,495	1,520	1,570
May	1,540	1,540	1,570	1,590	1,630
June	1,500	1,495	1,510	1,530	1,570
July	1,550	1,510	1,560	1,590	1,610
August	1,530	1,495	1,535	1,575	1,590
September	1,450	1,455	1,470	1,495	1,510
October	1,455	1,455	1,470	1,520	1,545
November	1,400	1,405	1,430	1,465	1,475
December	1,420	1,440	1,495	1,535	1,525
Annual *	**17,579**	**17,421**	**17,946**	**18,209**	**18,557**

Total Milk Production

1986	1987	1988	1989	1990
Million Pounds				
321	304	320	333	355
294	279	305	303	325
331	314	332	341	369
326	314	330	342	369
336	331	349	361	388
323	330	337	349	375
330	329	346	361	386
320	315	342	354	382
299	313	331	335	362
300	314	328	343	368
287	303	316	330	351
295	317	330	345	368
3,762	**3,763**	**3,966**	**4,097**	**4,398**

1/ Numbers were adjusted for 1986-88.

MANUFACTURED DAIRY PRODUCTS

It is helpful to remember that dairying in America had experienced little change with the arrival of dairy cows at Jamestown in 1611. In the following 200 years that it took for the dairy cow to reach the far west, dairying remained a small scale family operation.

The first creamery in Washington was started by Martin and Hubbard at Cheney in 1880. The population of the State was a mere 57,116 in that year and there were 27,622 milk cows recorded in the census plus 103,111 other cattle. Most of the milk was consumed raw or was skimmed and churned into butter or cheese.

During the period of 1890 - 1900, the dairy manufacturing industry progressed rapidly, and by the turn of the century, was one of the ten leading industries in Washington. The value of dairy products in the State for 1899 was $1,190,239 of butter, cream, cheese, and condensed milk. Three creameries in Seattle produced nearly $225,000 in dairy products, 19 percent of the total. By 1909 Washington ranked 3rd in the nation in the production of condensed milk, 13th in butter, and 15th in the production of cheese. In 1919 the value of production by the Washington Dairy Manufacturing Industry reached nearly $33,128,000.

In later years, history tells us the dairy industry was in turmoil before the cooperative idea was born shortly after World War I. Before the coops the nation's dairy farmers were at the mercy of creameries that may or may not have bought their milk. Milk marketing was in chaos, and it was clear that the individual dairymen could not fight the battle alone. There was a need for some kind of dairy farmer cooperation and planning.

The United Dairymens Association of Washington was formed in 1918 as a federation of five Puget Sound area county-wide dairy cooperative associations that had been selling their surplus milk as butter, cheese, evaporated milk, and dry milk in the Seattle market. In the early 1940's, United Dairymens Association represented as many as 47 local independent groups and nearly 50,000 small dairy farmer members throughout Washington, Oregon, Idaho, and Montana. The close of an era came on November 1, 1961 when the Kittitas Dairyman's Association merged with six Western Washington Associations to form the Northwest Dairymen's Association. On that same date the dairy plants were taken over by Consolidated Dairy Products Company, a sales agency for a family of Cooperatives in Idaho, Montana, Oregon, and Washington.

Cheese production in Washington increased steadily after World War II. Production of lowfat cottage cheese, for example, increased markedly during the 1950's. But output of creamed cottage cheese declined from a high of 27,107,000 pounds in 1960 to 23,573,000 in 1966.

Cheese production in Washington has taken an increasing share of the milk used in manufacturing dairy products. During the period of 1956-1964, this averaged less than 4 percent annually in manufactured dairy products. By 1965 the amount of milk utilized in cheese production rose 10 percent.

The amount of fluid milk used by manufacturers of ice cream and frozen dairy products in Washington has risen steadily. After 1950, ice cream and frozen dairy products became a principal user of fluid whole milk in dairy products manufacturing, second only to butter.

In 1966, 11,911,000 gallons of frozen product mixes (ice cream, ice milk and sherbet) were produced. Products made from these mixes totaled 21,335,000 gallons in 1966. Of these amounts, ice cream production was 13,311,000 gallons and ice milk was 6,787,000 gallons. Twenty-nine ice cream plants and chains with an annual output in excess of 20,000 gallons accounted for 12,581,000 of that amount. A total of 673 firms produced ice cream in 1966. Ice milk was produced by 2,613 firms.

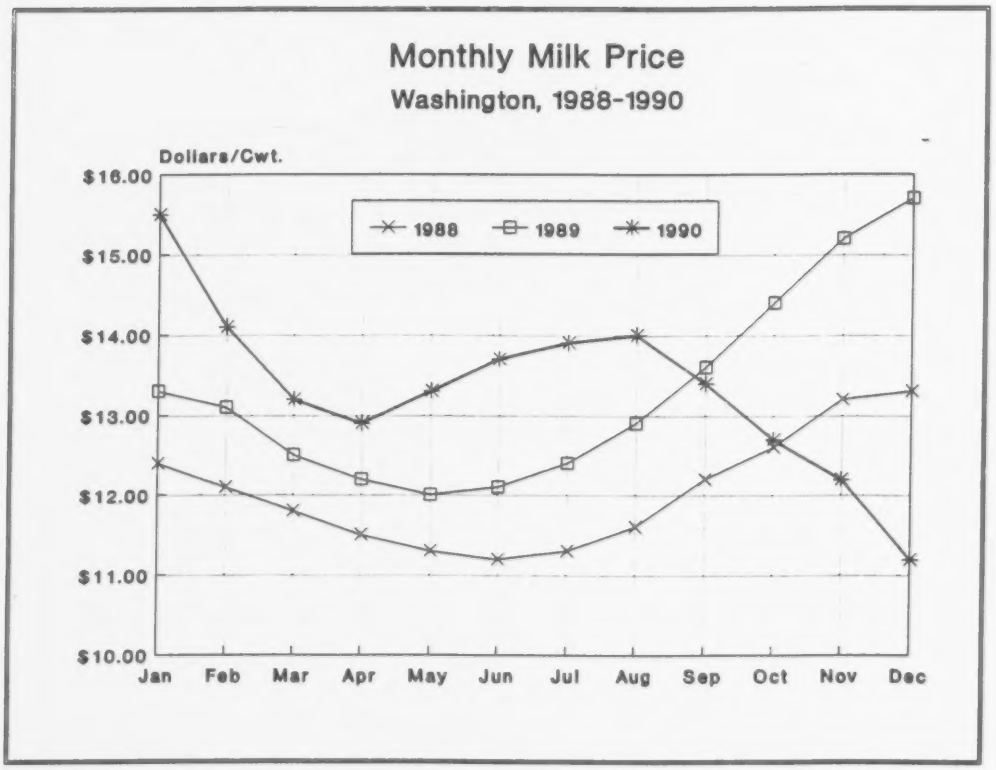
During the period of 1970 - 1980, new technology in industry was on a break through with assembly line production and use of computer technology.

Due to the increase of population a higher demand has been placed upon the dairymen and manufactured dairy plants for dairy products.

Thanks to the innovations of modern industry, dairy plants are continually upgrading their production lines with modern technology in order to help meet the demands placed upon them. Today, milk can be packaged at the speed of 100 gallons per minute on the assembly line, and can be on the local store shelf within two days. Half gallon ice cream containers are packaged at the rate of 60 gallons per minute and is also available on store shelves within 48 hours.

Since the beginning of dairying continuing to the present time, dairymen and manufactured dairy plants have come a long way in producing the high quality products in vast amounts we have today.

In 1990 total ice cream production for Washington State totaled 15,756,000 gallons. Total ice milk production in Washington totaled 9,203,000 gallons, while sherbet production was 1,368,000 gallons for 1990.



MANUFACTURED DAIRY PROGRAM

USDA started to provide annual statistics on the production of manufactured dairy products in 1917 due to the milk supplies that were shifting rapidly to large processing plants rather than being used for farm-produced cream, butter, and cheese or for home deliveries by farmers. Monthly reports were inaugurated during World War II. Washington Agricultural Statistics now reports production statistics for 27 major dairy production plants.

Monthly production of manufactured dairy products are obtained in most states by a mail survey of processing plants. Plants that produce butter and cheeses usually do not produce frozen products or cottage cheeses. A special effort is made to obtain data from all large plants each month. Survey questionnaires are mailed out to plants around the 25th of each month.

All questionnaires that are returned to Washington Agricultural Statistics Service are reviewed and summarized. Any unusual change is carefully reviewed and followed up by a telephone call to that plant. This is especially important when a plant reports production one month, but does not report production for the following month. Also, if it appears that incorrect data was reported, a telephone call is made to the plant for clarification.

A complete enumeration is done on all dairy manufacturing plants, and a production estimate is made for each product by totaling reports for each product. When a report is not obtained, monthly estimates are computed based upon matching current survey reports with previous reports of production by that plant for the previous month or prior year

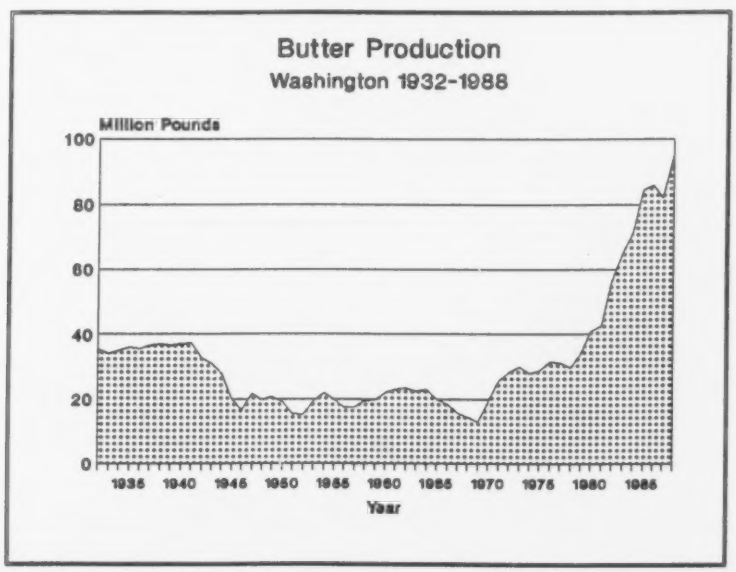
Preliminary monthly estimates are released at the end of each month for the preceding month to which the reporting period relates. All products are reported on a national basis, major products are also reported on a State basis. There is one exception to this, that is when less than three plants produce a product or when a plant's production is 60 percent or greater of the State total. This creates a potential disclosure situation of individual data, and written approval must be obtained from the plants to publish the data.

We certainly appreciate the cooperation of the individual dairy producers and the manufacturing dairy plants in providing data for our estimates. Without this cooperation, accurate estimates would not be possible.

Production of Butter, Washington

Year	Butter	Number of Butter Plants	Year	Butter	Number of Butter Plants
	1,000 Pounds			1,000 Pounds	
			1961	22,960	39
1932	35,612	114	1962	23,444	32
1933	34,146	114	1963	22,368	31
1934	35,170	119	1964	23,090	28
1935	36,143	135	1965	19,887	28
1936	35,680	140	1966	18,338	28
1937	36,594	128	1967	15,613	1/
1938	37,109	131	1968	14,446	1/
1939	36,586	126	1969	12,907	1/
1940	37,025	122	1970	19,216	1/
1941	37,423	118	1971	25,743	1/
1942	32,488	109	1972	28,168	1/
1943	31,131	108	1973	29,953	1/
1944	27,977	105	1974	27,986	1/
1945	19,969	97	1975	28,695	1/
1946	16,616	93	1976	31,671	1/
1947	21,666	87	1977	31,358	1/
1948	19,630	83	1978	29,751	1/
1949	20,708	79	1979	34,010	1/
1950	19,141	75	1980	40,793	1/
1951	15,400	71	1981	42,597	1/
1952	15,223	70	1982	56,282	1/
1953	19,201	65	1983	64,695	1/
1954	21,998	66	1984	70,892	1/
1955	19,847	61	1985	84,496	1/
1956	17,505	56	1986	86,067	1/
1957	17,471	54	1987	81,954	1/
1958	19,422	47	1988	95,113	1/
1959	19,741	43	1989	1/	1/
1960	21,962	40	1990	1/	1/

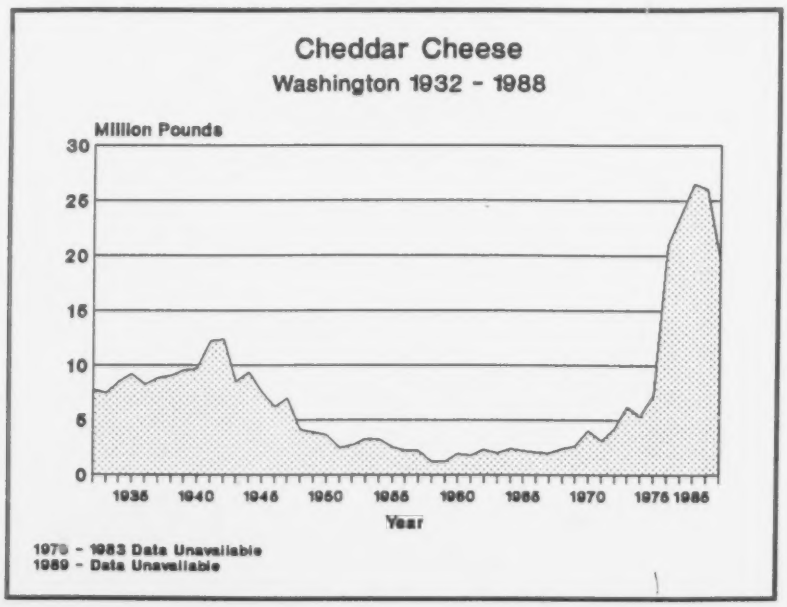
1/ Estimate not published due to less than 3 plants reporting or 1 plant has more than 60 percent of production.



Production of Cheddar, Italian, and Total Cheese, Washington

Year	Cheddar	Italian	Total Cheese	Year	Cheddar	Italian	Total Cheese
	1,000 Pounds				1,000 Pounds		
1932	7,784	NA	NA	1961	1,773	NA	NA
1933	7,525	NA	NA	1962	2,305	NA	NA
1934	8,523	NA	NA	1963	1,973	NA	NA
1935	9,262	NA	NA	1964	2,437	2,280	NA
1936	8,289	NA	NA	1965	2,215	3,855	NA
1937	8,865	NA	NA	1966	2,101	6,545	NA
1938	9,096	NA	NA	1967	1,975	8,471	13,689
1939	9,550	NA	NA	1968	2,391	8,438	13,475
1940	9,730	NA	NA	1969	2,670	9,099	15,520
1941	12,274	NA	NA	1970	4,048	10,883	20,126
1942	12,393	NA	NA	1971	3,138	9,642	14,566
1943	8,484	NA	NA	1972	4,296	10,682	16,756
1944	9,388	NA	NA	1973	6,211	14,315	22,941
1945	7,562	NA	NA	1974	5,370	13,910	21,736
1946	6,205	NA	NA	1975	7,227	14,306	23,547
1947	6,975	NA	NA	1976	1/	14,182	30,501
1948	4,166	NA	NA	1977	1/	15,370	33,562
1949	3,935	NA	NA	1978	1/	16,898	40,836
1950	3,701	NA	NA	1979	1/	15,001	46,274
1951	2,522	NA	NA	1980	1/	15,219	45,147
1952	2,741	NA	NA	1981	1/	15,923	46,453
1953	3,247	NA	NA	1982	1/	14,256	49,706
1954	3,280	NA	NA	1983	1/	1/	60,011
1955	2,581	NA	NA	1984	20,946	19,118	47,205
1956	2,281	NA	NA	1985	23,867	20,714	51,851
1957	2,229	NA	NA	1986	26,547	23,269	57,175
1958	1,246	NA	NA	1987	26,038	25,296	57,879
1959	1,241	NA	NA	1988	19,710	25,235	53,732
1960	1,954	NA	NA	1989	1/	35,637	67,630
				1990	1/	31,052	71,322

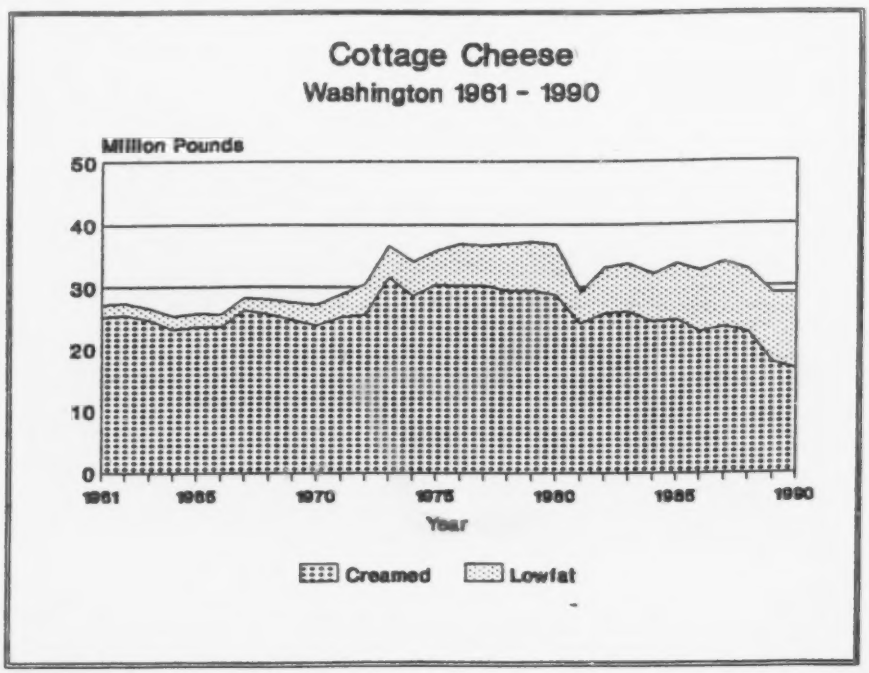
NA = Estimates not available.
1/ Estimate not published due to less than 3 plants or 1 plant has more than 60 percent of production.



Production of Cottage Cheese: Curd, Creamed, and Lowfat, Washington

Year	Curd	Creamed	Lowfat	Year	Curd	Creamed	Lowfat
	1,000 Pounds				1,000 Pounds		
				1961	16,743	25,149	2,060
1932	3,164	NA	NA	1962	17,020	25,534	1,910
1933	2,693	NA	NA	1963	16,781	24,683	1,865
1934	2,946	NA	NA	1964	15,979	23,057	2,198
1935	3,608	NA	NA	1965	16,365	23,615	2,143
1936	4,220	NA	NA	1966	16,160	23,573	2,003
1937	4,434	NA	NA	1967	18,405	26,166	2,023
1938	4,763	NA	NA	1968	18,068	25,657	2,362
1939	4,636	NA	NA	1969	17,277	24,624	2,920
1940	6,146	NA	NA	1970	16,665	23,808	3,346
1941	8,583	NA	NA	1971	17,548	25,134	3,695
1942	9,062	NA	NA	1972	18,967	26,650	4,937
1943	10,207	NA	NA	1973	21,649	31,602	5,084
1944	12,558	NA	NA	1974	20,414	28,518	5,483
1945	14,915	NA	NA	1975	21,418	30,330	5,460
1946	11,673	14,908	NA	1976	22,025	30,189	6,656
1947	9,426	15,557	NA	1977	22,734	30,275	6,342
1948	9,219	14,987	NA	1978	23,876	29,428	7,498
1949	10,146	16,300	NA	1979	23,073	29,439	7,795
1950	13,253	17,749	NA	1980	22,566	28,662	8,160
1951	12,153	19,346	NA	1981	22,452	24,046	5,178
1952	13,668	19,836	NA	1982	20,474	25,726	7,347
1953	12,998	20,389	NA	1983	19,746	25,951	7,776
1954	13,651	21,256	NA	1984	18,935	24,360	7,652
1955	13,924	21,526	NA	1985	19,773	24,672	9,016
1956	16,380	24,919	NA	1986	19,332	22,639	9,851
1957	16,186	25,251	NA	1987	19,789	23,486	10,442
1958	16,721	26,303	NA	1988	20,642	22,637	10,018
1959	17,095	26,708	NA	1989	1/	17,630	11,161
1960	17,258	27,107	NA	1990	18,843	16,624	12,217

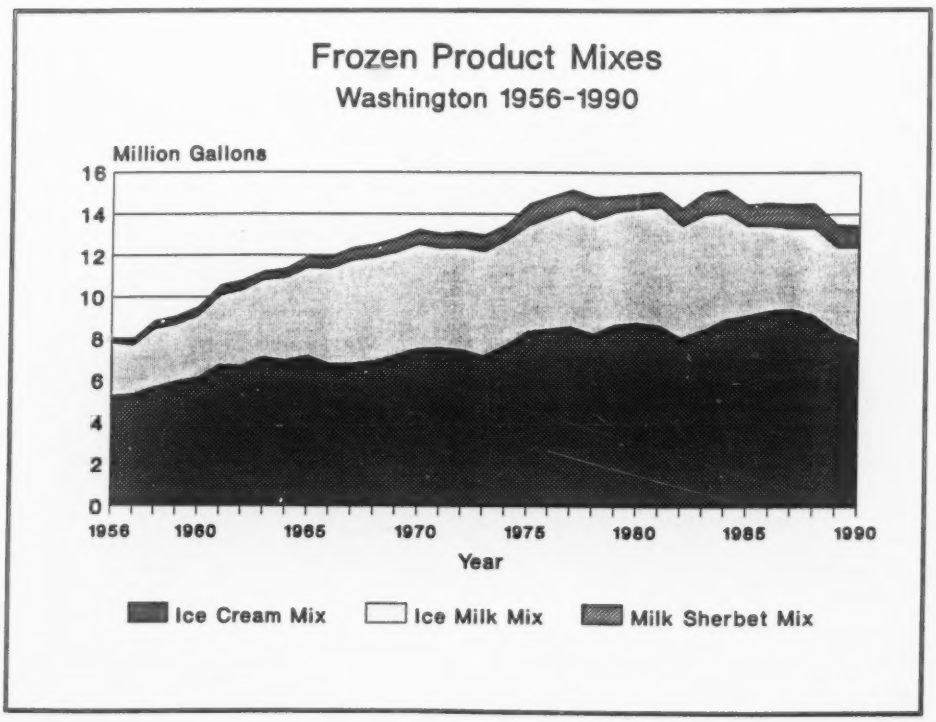
NA = Estimates not available.
1/ Estimate not published due to less than 3 plants or 1 plant has more than 60 percent of production.



Production of Mix: Ice Cream, Ice Milk, and Milk Sherbet, Washington

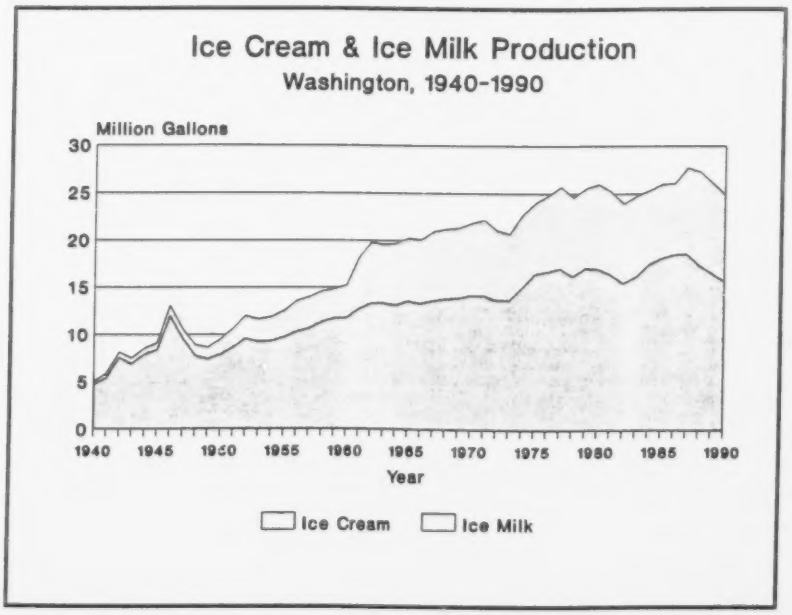
Year	Ice Cream Mix	Ice Milk Mix	Milk Sherbet Mix	Year	Ice Cream Mix	Ice Milk Mix	Milk Sherbet Mix
	1,000 Gallons				1,000 Gallons		
1949	4,019	NA	NA				
1950	4,677	NA	NA				
1951	4,612	NA	NA	1971	7,538	4,827	689
1952	4,980	NA	NA	1972	7,459	4,933	758
1953	4,811	NA	NA	1973	7,145	5,030	809
1954	4,818	NA	NA	1974	7,661	5,060	783
1955	5,213	NA	NA	1975	8,329	5,132	1,022
1956	5,256	2,568	203	1976	8,451	5,388	972
1957	5,302	2,361	293	1977	8,578	5,672	926
1958	5,631	2,840	358	1978	8,221	5,524	1,073
1959	5,912	2,755	379	1979	8,679	5,441	748
1960	6,108	2,989	393	1980	8,782	5,458	740
1961	6,738	3,316	480	1981	8,640	5,733	709
1962	6,644	3,666	460	1982	8,042	5,441	807
1963	7,101	3,713	400	1983	8,433	5,544	1,072
1964	6,925	3,990	430	1984	8,913	5,165	1,094
1965	7,142	4,278	518	1985	9,097	4,348	1,010
1966	6,766	4,590	558	1986	9,332	4,121	1,093
1967	6,771	4,992	602	1987	9,414	3,925	1,139
1968	6,882	5,023	628	1988	9,121	4,195	1,182
1969	7,167	5,000	659	1989	8,296	4,121	1,078
1970	7,497	5,048	703	1990	7,884	4,526	1,042

NA = Estimates not available.



Production of Ice Cream and Ice Milk, Washington

Year	Ice Cream	Ice Milk
	1,000 Gallons	
1940	4,676	342
1941	5,443	444
1942	7,565	586
1943	6,942	590
1944	7,895	678
1945	8,370	729
1946	11,980	1,082
1947	9,572	1,035
1948	7,823	1,125
1949	7,390	1,252
1950	7,902	1,614
1951	8,643	2,027
1952	9,603	2,404
1953	9,257	2,397
1954	9,320	2,581
1955	9,730	2,785
1956	10,285	3,219
1957	10,656	2,922
1958	11,365	3,199
1959	11,714	3,123
1960	11,754	3,497
1961	12,735	5,482
1962	13,328	6,470
1963	13,347	6,216
1964	13,132	6,555
1965	13,611	6,614
1966	13,311	6,787
1967	13,661	7,305
1968	13,816	7,396
1969	13,923	7,432
1970	14,192	7,659
1971	14,225	7,947
1972	13,750	7,364
1973	13,744	6,987
1974	15,111	7,670
1975	16,472	7,537
1976	16,725	8,010
1977	17,110	8,583
1978	16,257	8,380
1979	17,139	8,385
1980	17,040	8,935
1981	16,505	8,731
1982	15,518	8,458
1983	16,224	8,515
1984	17,500	7,804
1985	18,153	7,815
1986	18,557	7,497
1987	18,652	9,019
1988	17,411	9,855
1989	16,568	9,560
1990	15,756	9,203



DAIRY PRODUCTS

Lowfat Cottage Cheese

Month	1986	1987	1988	1989	1990
	1,000 Pounds				
January	804	833	790	996	944
February	787	872	885	850	900
March	878	865	832	930	1,080
April	878	921	796	913	1,030
May	809	918	912	998	1,152
June	869	897	774	980	1,047
July	873	891	888	821	1,056
August	850	942	976	1,014	1,016
September	855	905	873	900	929
October	793	890	792	928	1,088
November	736	770	721	927	999
December	719	738	719	904	976
Annual	**9,851**	**10,442**	**10,018**	**11,161**	**12,217**

Creamed Cottage Cheese

Month	1986	1987	1988	1989	1990
	1,000 Pounds				
January	1,962	2,063	1,855	1,594	1,719
February	1,692	1,931	1,778	1,404	1,541
March	1,841	2,115	1,863	1,684	1,321
April	1,890	2,023	1,787	1,396	1,267
May	2,089	2,085	1,959	1,485	1,432
June	1,889	2,047	2,186	1,552	1,262
July	1,956	2,106	1,741	1,456	1,450
August	1,797	1,897	1,919	1,652	1,572
September	1,983	1,781	1,861	1,399	1,209
October	2,039	1,898	1,734	1,412	1,335
November	1,751	1,719	1,738	1,332	1,338
December	1,750	1,821	2,216	1,264	1,178
Annual	**22,639**	**23,486**	**22,637**	**17,630**	**16,624**

Italian Cheese Production

Month	1986	1987	1988	1989	1990
	1,000 Pounds				
January	1,756	2,067	2,006	2,044	3,251
February	1,585	1,821	2,167	1,634	2,420
March	1,969	2,256	2,191	1,958	2,374
April	1,878	1,893	2,132	2,192	2,355
May	1,900	1,789	2,188	2,539	2,822
June	1,905	2,290	2,120	2,507	2,667
July	1,931	2,332	2,056	2,499	2,657
August	2,010	2,149	2,098	3,718	2,551
September	1,922	2,334	2,072	4,119	2,361
October	2,129	2,306	2,053	4,235	2,510
November	2,091	2,008	2,098	3,873	2,534
December	2,193	2,051	2,054	4,319	2,550
Annual	**23,269**	**25,296**	**25,235**	**35,637**	**31,052**

Total Cheese Excluding Cottage

Month	1986	1987	1988	1989	1990
	1,000 Pounds				
January	4,545	4,600	4,253	4,627	5,837
February	4,168	4,026	4,380	3,978	5,253
March	4,087	4,674	4,900	4,546	5,879
April	4,733	4,333	4,219	4,522	5,765
May	4,841	4,271	4,674	5,249	6,428
June	5,049	5,000	4,440	5,515	6,633
July	5,216	5,252	4,042	5,238	6,750
August	5,166	4,709	4,432	6,653	6,611
September	4,704	5,548	4,542	6,835	5,868
October	5,029	5,931	4,520	7,184	6,132
November	4,555	4,738	4,687	6,538	4,955
December	5,082	4,797	4,643	6,745	5,211
Annual	**57,175**	**57,879**	**53,732**	**67,630**	**71,322**

Ice Cream Mix

Month	1986	1987	1988	1989	1990
	1,000 Gallons				
January	584	651	527	626	471
February	693	672	611	627	551
March	727	823	786	807	685
April	786	852	719	653	601
May	792	856	817	848	696
June	984	927	894	802	679
July	865	908	928	892	782
August	879	975	943	841	740
September	788	745	758	615	715
October	718	704	917	549	658
November	856	653	611	574	726
December	660	648	610	462	580
Annual	**9,332**	**9,414**	**9,121**	**8,296**	**7,884**

Total Ice Cream

Month	1986	1987	1988	1989	1990
	1,000 Gallons				
January	1,218	1,270	1,064	1,257	941
February	1,353	1,343	1,223	1,235	1,117
March	1,490	1,592	1,516	1,671	1,361
April	1,569	1,653	1,515	1,326	1,222
May	1,580	1,759	1,535	1,652	1,468
June	1,920	1,824	1,238	1,595	1,370
July	1,665	1,870	1,860	1,753	1,509
August	1,721	1,948	1,716	1,673	1,585
September	1,577	1,501	1,479	1,234	1,316
October	1,438	1,308	1,845	1,121	1,322
November	1,696	1,316	1,229	1,111	1,384
December	1,330	1,268	1,191	940	1,161
Annual	**18,557**	**18,652**	**17,411**	**16,568**	**15,756**

Ice Milk Mix

Month	1986	1987	1988	1989	1990
	1,000 Gallons				
January	249	208	228	245	294
February	251	239	222	240	247
March	328	302	324	319	367
April	349	312	333	386	413
May	399	425	377	379	481
June	431	391	430	463	381
July	428	438	492	338	492
August	425	376	467	454	433
September	352	364	346	389	423
October	330	312	349	307	349
November	280	268	305	312	382
December	299	290	322	289	264
Annual	**4,121**	**3,925**	**4,195**	**4,121**	**4,526**

Total Ice Milk

Month	1986	1987	1988	1989	1990
	1,000 Gallons				
January	447	470	506	551	701
February	457	526	523	553	577
March	615	710	763	772	921
April	662	700	750	920	931
May	747	919	902	909	1,022
June	767	835	1,020	1,106	703
July	763	1,014	1,146	689	896
August	765	872	1,159	1,081	776
September	648	862	829	923	816
October	600	820	839	678	587
November	500	620	691	721	803
December	526	671	727	657	470
Annual	**7,497**	**9,019**	**9,855**	**9,560**	**9,203**

Per Capita Consumption, U.S.

Year	Cottage Cheese Total	Total Cheese	Italian	Ice Cream	Ice Milk	Sherbet
	Pounds					
1971	5.3	12.0	2.3	17.7	7.6	1.5
1976	4.7	15.5	3.6	18.0	7.2	1.5
1981	4.3	18.2	4.5	17.4	7.0	1.3
1986	4.1	23.0	7.0	18.4	7.2	1.3
1987	3.9	24.0	7.6	18.3	7.4	1.2
1988	3.9	23.6	8.1	17.2	7.9	1.3
1989	3.5	23.7	8.5	16.0	8.3	1.3

SOURCE: Dairy: Situation and Outlook, August 1990

Sherbet

Month	1986	1987	1988	1989	1990
	1,000 Gallons				
January	108	132	85	110	66
February	105	94	96	95	89
March	136	129	138	145	113
April	115	160	134	122	118
May	148	166	217	162	129
June	150	147	132	145	133
July	176	131	126	125	120
August	96	131	215	133	148
September	97	121	103	81	121
October	97	109	136	99	110
November	97	92	96	73	105
December	134	112	105	94	116
Annual	**1,459**	**1,524**	**1,583**	**1,384**	**1,368**

Hogs

The inventory of all hogs and pigs on Washington's 2,500 hog farms totaled 56,000 head, unchanged from the previous year. Breeding hogs increased by 1,000 head, but was offset by an equal decline in market hogs. Sows farrowed averaged 8.3 pigs per litter in 1990. The total pig crop for 1990 was 100,000 head, 7 percent below the 1989 pig crop. The 1990 value of production is estimated at $11.6 million compared with $9.4 million in 1989. The average price for hogs and pigs marketed in 1990 was estimated at $50.70 per 100 pounds, $8.50 above 1989.

Primary data used in setting the hog estimates were obtained from a sample of producers across Washington using probability surveys. These surveys included information from a sample of operators on a universal list plus additional information from area tract operators. The information was collected during the first half of December by mail, telephone, and personal interviews. A thanks is in order for all producers participating in these surveys.

Inventory on Farms by Class, December 1

Class	1986	1987	1988	1989	1990
	1,000 Head				
Hogs					
Breeding Hogs	9	6	7	9	10
Market Hogs	41	49	46	47	46
All Hogs	**50**	**55**	**53**	**56**	**56**
Number of Hog Operations 1/	**3,300**	**3,200**	**3,400**	**3,000**	**2,500**

1/ Any place having one or more head on hand at any time during the year.

Pig Crop

Year	December 1/ - February			March-May		
	Sows Farrowed	Pigs Per Litter	Pig Crop	Sows Farrowed	Pigs Per Litter	Pig Crop
	1,000 Head	Head	1,000 Head	1,000 Head	Head	1,000 Head
1986	2.7	*	*	1.9	7.7 *	31 *
1987	3.6	*	*	2.4	7.0 *	42 *
1988	3.4	8.2	28	3.4	6.5	22
1989	3.0	7.0	21	4.4	8.0	35
1990	3.0	8.7	26	3.0	8.0	24

Year	June-August			September-November		
	Sows Farrowed	Pigs Per Litter	Pig Crop	Sows Farrowed	Pigs Per Litter	Pig Crop
	1,000 Head	Head	1,000 Head	1,000 Head	Head	1,000 Head
1986	1.9	*	*	3.1	7.8 *	39 *
1987	2.6	*	*	3.4	8.2 *	49 *
1988	3.3	7.9	26	2.8	7.9	22
1989	3.0	8.0	24	3.0	9.0	27
1990	3.0	8.3	25	3.0	8.3	25

1/ December of the preceding year.
* Sows farrowed are shown for 3-month periods, while litter size and pig crop are available

Balance Sheet

Year	Beginning Inventory Prev. Yr.	Pigs Saved		Inshipment	Marketings 1/	Farm Slaughter 2/	Deaths	Inventory December 1
		Dec.- May	Jun.- Nov.					
	1,000 Head							
1986	51	31	39	0	61	4	6	50
1987	50	42	49	0	73	6	7	55
1988	55	50	48	0	89	3	8	53
1989	53	56	51	0	84	12	8	56
1990	56	50	50	0	87	7	6	56

1/ Excludes interfarm sales within the State.
2/ Excludes custom slaughter for farmers at commercial establishments.

Production and Income

Year	Production 1/	Marketings 2/	Average Price Per Cwt.	Value of:			
				Production	Cash Receipts	Home Consumption	Gross Income
	1,000 Pounds		Dollars	1,000 Dollars			
1986	15,058	11,265	48.00	7,227	5,407	1,886	7,293
1987	18,536	13,246	50.00	9,268	6,623	2,599	9,222
1988	21,629	19,664	40.30	8,717	7,925	764	8,689
1989	22,301	18,713	42.20	9,411	7,897	1,274	9,171
1990	22,840	19,932	50.70	11,581	10,106	1,244	11,350

1/ Adjustments made for changes in inventory and for inshipments.
2/ Excludes custom slaughter for use on farms where produced and interfarm sales within the State.

Commercial Slaughter

Year and Month	Washington			United States		
	Head	Liveweight		Head	Liveweight	
		Per Head	Total		Per Head	Total
	1,000	Pounds	1,000 Pounds	1,000	Pounds	1,000 Pounds
1990 January	1.6	240	382	7,618.5	249	1,897,954
February	1.4	237	328	6,810.1	248	1,686,005
March	1.5	241	369	7,454.8	248	1,846,574
April	1.6	239	392	6,961.6	249	1,735,479
May	1.5	241	363	6,980.5	250	1,747,707
June	1.6	238	390	6,320.9	251	1,588,404
July	1.6	242	382	6,153.3	248	1,525,449
August	2.0	244	478	7,302.8	248	1,812,787
September	1.7	244	404	6,889.4	247	1,702,419
October	1.7	240	413	7,757.0	249	1,933,817
November	1.5	246	377	7,532.1	253	1,903,157
December	1.6	236	381	7,354.6	252	1,850,365
1986.....	29.5	240	7,088	79,598.2	246	19,564,663
1987.....	19.2	231	4,429	81,080.8	247	20,060,447
1988.....	18.2	235	4,281	87,794.6	249	21,838,367
1989.....	18.4	228	4,191	88,691.5	248	22,026,822
1990.....	19.4	241	4,660	85,135.5	249	21,230,117

Sheep and Lambs

The all sheep and lamb inventory in Washington on January 1, 1991 totaled 81,000 head, down 2 percent from last year's 83,000 head. This decline comes after increases for five consecutive years. Primary data used in making sheep and lamb estimates in this section were obtained from a sample of agricultural producers across Washington using probability surveys. Information was collected during the first half of January by mail, telephone, and personal interview. The average price for wool dropped sharply to $.58 per pound in 1990. This is the lowest price since $.52 per pound in 1985. Total value of shorn wool was $387,000 nearly half of last year's value.

Number on Farms by Class, January 1

Class	1987	1988	1989	1990	1991
	1,000 Head				
Sheep and Lambs					
Ewe Lambs	9.5	12.0	14.5	15.5	15.0
Wether and Ram Lambs	3.5	4.0	4.5	5.5	4.0
Ewes, 1 year plus	44.0	54.0	51.0	58.0	59.0
Rams and Wethers, 1 year plus	2.0	2.0	4.0	4.0	3.0
All Sheep and Lambs	**59.0**	**72.0**	**74.0**	**83.0**	**81.0**
Number of Sheep Operations 1/	**2,200**	**2,200**	**2,200**	**2,200**	**2,200**

1/ Any place having one or more head on hand at any time during the year.

Balance Sheet

Year	Inventory January 1	Lamb Crop	Inship-ments	Marketings 1/		Farm Slaughter 2/	Deaths		Inventory Following January 1
				Sheep	Lambs		Sheep	Lambs	
	1,000 Head								
1986	58	58	7	7	45	4	4	4	59
1987	59	58	10	4	40	1	4	6	72
1988	72	65	8	6	55	1	3	6	74
1989	74	75	4	6	48	3	6	7	83
1990	83	70	9	18	51	2	3	7	81

1/ Excludes interfarm sales within the State.
2/ Excludes custom slaughter for farmers at commercial establishments.

Production and Income

Year	Pro-duction 1/	Market-ings 2/	Average Price Per Cwt.		Value of			
			Sheep	Lambs	Pro-duction	Cash Receipts	Home Con-sumption	Gross Income
	1,000 Pounds		Dollars		1,000 Dollars			
1986	5,871	5,713	14.90	65.60	3,376	3,371	396	3,767
1987	5,903	4,895	24.00	74.40	3,376	3,408	111	3,519
1988	6,400	6,772	20.20	62.20	3,715	3,920	114	4,034
1989	7,286	6,026	21.20	65.00	3,956	3,612	240	3,852
1990	6,863	7,665	17.00	53.10	2,906	3,316	184	3,500

1/ Adjustments made for changes in inventory and for inshipments.
2/ Excludes custom slaughter for use on farms where produced and interfarm sales within

In January 1991 a special probability sheep predator losses survey was conducted in the 48 states plus Hawaii, but excluding Alaska. A total of 1,800 sheep and lambs were lost from animal predators during 1990 in Washington. The value of predator losses totaled $76,400. Predators accounted for 17 percent of all death losses to sheep and lambs during 1990. No similar nationwide survey on predator losses is currently planned for any future date.

Total Head Lost and Value of Losses, 1990

Cause	Head Lost			Value of Losses		
	Lambs After Docking	Sheep	Total All	Lambs After Docking	Sheep	Total All
	Head			Dollars		
Coyote	1,100	200	1,300	35,200	15,800	51,000
Dog	200	100	300	6,400	7,900	14,300
Mountain Lions	1/	1/	1/	1/	1/	1/
Bears	0	0	0	0	0	0
Fox	0	0	0	0	0	0
Eagle	1/	1/	1/	1/	1/	1/
Bobcats	1/	0	1/	1/	0	1/
Other Animals	100	100	200	3,200	7,900	11,100
Total Predators	1,400	400	1,800	44,800	31,600	76,400
Natural Causes 2/	5,600	2,600	8,200	178,200	205,400	384,600
Total All Causes	7,000	3,000	10,000	224,000	237,000	461,000

1/ Less than 100 head, but number is included in Mountain and Western total.
2/ Losses due to weather, disease, poison, etc.

Commercial Slaughter

Year and Month	Washington			United States		
	Head	Liveweight		Head	Liveweight	
		Per Head	Total		Per Head	Total
	1,000	Pounds	1,000 Pounds	1,000	Pounds	1,000 Pounds
1986.....	155.4	119	18,524	5,635.0	117	659,893
1987.....	156.7	118	18,498	5,199.6	119	618,670
1988.....	163.5	118	19,345	5,293.0	124	653,710
1989.....	153.8	121	18,573	5,464.8	124	677,001
1990.....	190.1	118	22,536	5,653.7	125	708,205

Wool Production and Income

Year	Number Sheep Shorn	Weight Per Fleece	Wool Production	Price Per Pound	Value of Production
	1,000 Head	Pounds	1,000 Pounds	Cents	1,000 Dollars
1986	66	8.1	533	60	320
1987	70	8.9	626	77	482
1988	72	8.6	621	101	627
1989	74	8.7	642	104	668
1990	77	8.7	668	58	387

POULTRY

Two types of poultry farms are operating in Washington. The first type produces eggs, and the second type produces meat for the broiler market.

The U.S. per capita egg consumption declined to 235 eggs per person in 1990. Egg consumption has declined steadily since the end of World War II, when it peaked in 1945 at 403 eggs per person. Population growth and increased consumption of processed egg products, however, have kept egg sales from declining. Egg production in Washington for 1990 declined to 1,287 million eggs. This is 1 percent below last year's production of 1,299 million.

Broiler production has been favorable. Per capita consumption of young chickens reached a record 73.5 pounds, 3.6 pounds above a year earlier. Washington broiler growers produced 156.5 million pounds of poultry meat in 1990, 12 percent above the previous year. The value of broiler production also reached a record high $50.9 million despite a three and a half cent decline in price to the grower.

Inventory on Farms by Class, December 1

Class	1986	1987	1988	1989	1990
	1,000 Birds				
Hens and Pullets of Laying Age:					
Hens (1 year and older)	2,744	2,760	2,768	2,885	2,591
Pullets of laying age	2,357	2,899	2,106	1,844	2,372
Total	**5,101**	**5,059**	**4,874**	**4,729**	**4,963**
Pullets, 3 months plus	220	390	609	548	579
Pullets, less than 3 months	352	540	590	537	855
Other Chickens	27	16	12	12	32
All Chickens (excluding broilers)	**5,700**	**6,005**	**6,085**	**5,826**	**6,429**
Number of Chicken Operations 1/	**2/**	**2/**	**2/**	**2/**	**2/**

1/ Any place having one or more head on hand at any time during the year.
2/ Estimate discontinued.

Average Number of Layers

Month 1/	1986	1987	1988	1989	1990
	1,000 Birds				
December	5,166	5,100	5,076	4,799	4,800
January	5,082	4,994	5,099	4,827	4,798
February	5,091	4,996	5,071	4,842	4,823
March	5,143	5,052	5,008	4,838	4,876
April	5,174	5,033	4,999	4,878	4,817
May	5,028	5,058	4,967	4,808	4,842
June	4,853	5,055	4,982	4,809	4,859
July	4,946	5,061	4,966	4,802	4,867
August	5,063	5,036	4,941	4,786	4,907
September	5,023	4,892	4,973	4,805	4,813
October	5,044	4,880	5,029	4,749	4,873
November	5,088	5,023	4,992	4,710	4,999
Annual Average	**5,059**	**5,016**	**5,008**	**4,804**	**4,856**
State Total	-	-	-	-	-

Egg Production

Month 1/	1986	1987	1988	1989	1990
	Million				
December	115	112	115	110	107
January	112	109	113	109	106
February	96	95	104	100	96
March	106	109	113	112	109
April	105	109	109	110	106
May	108	110	109	111	108
June	105	108	107	107	104
July	110	116	113	112	111
August	112	113	112	111	112
September	107	106	110	106	108
October	110	108	113	108	111
November	109	108	109	103	109
Annual Average	-	-	-	-	-
State Total	**1,295**	**1,303**	**1,327**	**1,299**	**1,287**

1/ December 1 previous year to November 30.
- Not applicable.

Chicken Production and Income 1/ 2/

Egg Production and Income 2/

Year	Number Sold	Pounds Sold	Price Per Pound	Value of Sales	Eggs Produced	Price Per Dozen	Value of Production
	1,000 Birds	1,000 Pounds	Cents	1,000 Dollars	Millions	Cents	1,000 Dollars
1986	3,400	12,920	8.0	1,034	1,295	51.5	55,577
1987	3,600	13,680	8.0	1,094	1,303	44.4	48,211
1988	3,600	13,320	6.0	799	1,327	50.1	55,402
1989	3,300	12,210	7.0	855	1,299	73.1	79,131
1990	3,600	13,320	2.0	266	1,287	74.1	79,472

1/ Excluding broilers.
2/ 12 month period December 1, previous year, through November 30.

Broiler Production and Income

Year	Number Produced	Pounds Produced	Price Per Pound	Gross Income 1/
	1,000 Birds	1,000 Pounds	Cents	1,000 Dollars
1986	25,100	112,950	31.0	35,015
1987	26,800	123,280	29.0	35,751
1988	28,200	129,720	31.5	40,862
1989	30,500	140,300	36.0	50,508
1990	33,300	156,510	32.5	50,866

1/ Includes value of home consumption.

Commercial Broiler Slaughter 1/

Year	Washington			United States		
	Number Slaughtered	Average Liveweight	Certified Pounds 2/	Number Slaughtered	Average Liveweight	Certified Pounds 2/
	1,000 Head	Pounds	1,000 Pounds	1,000 Head	Pounds	1,000 Pounds
1986	25,047	4.45	83,248	4,642,784	4.23	14,265,627
1987	26,512	4.62	91,694	4,971,470	4.29	15,502,464
1988	28,607	4.59	97,877	5,158,710	4.30	22,207,755
1989	32,260	4.59	109,472	5,499,313	4.34	17,334,177
1990	32,433	4.66	112,120	5,809,851	4.37	18,449,218

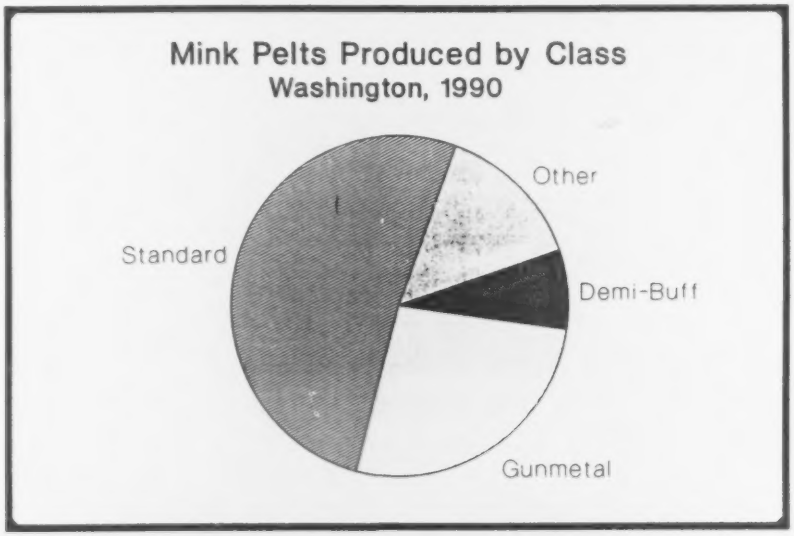
1/ January through December.
2/ Ready to cook weight.

MINK

Forty-three Washington mink growers produced 172,400 pelts in 1990, 27 percent fewer than the previous year. The depressed pelt market has forced eight mink operations to pelt out during the 1990 crop year. This was offset by only one new operation. Washington ranked 6th nationally with 5.1 percent of the U.S. pelt production. Wisconsin, Utah, Minnesota, Idaho, and Pennsylvania ranked one, two, three, four, and five in order of pelt production. A number of color classes had to be combined for the 1990 pelt crop and females bred to avoid disclosure of individual operations. The unpublished color classes were, however, combined into the "other" class and included in the State total.

Snohomish County continues to be the top producer of mink pelts in Washington. Kittitas and Pierce Counties were second and third. These three counties produced nearly 70 percent of Washington's 1990 pelt crop.

Females bred to produce kits in 1991 is estimated at 38,400, 10 percent less than the previous year's 42,800.



Mink Pelts and Females Bred to Produce Kits

Color	Pelts Produced						Females Bred to Produce Kits					
	1985	1986	1987	1988	1989	1990	1986	1987	1988	1989	1990	1991
	1,000						1,000					
Standard	109.6	109.2	113.0	123.2	113.5	87.7	25.3	28.3	30.1	31.0	21.3	22.1
Ranch Wild	50.1	5.6	6.1	7.6	33.4	1/	3.6	1.7	2.2	9.2	5.6	2/
Demi-buff	18.7	47.2	49.1	46.9	16.1	12.8	11.6	11.7	11.8	3.9	3.2	2/
Gunmetal	33.5	42.7	43.1	50.9	59.5	45.7	10.9	12.7	14.0	13.5	11.4	9.2
Mahogany	3.2	3.1	2.5	8.9	6.9	1/	.8	.6	1.2	2.2	1/	0
Pastel	5.2	4.9	2.3	3.5	2.9	2.0	1.3	1.1	1.1	1.0	.6	1/
Sapphire	3.7	1/	2.2	2.5	3.7	1/	1/	.8	.7	.9	1/	0
Violet Type	1/	1/	1/	1/	1/	0	1/	1/	1/	1/	1/	0
Other	2.0	4.6	1.6	.5	1.2	24.2	1.5	.3	.3	.3	.7	7.1
Total	**226.0**	**217.3**	**219.9**	**244.0**	**237.2**	**172.4**	**55.0**	**57.2**	**61.4**	**62.0**	**42.8**	**38.4**
Number Of Operations	**45**	**42**	**49**	**46**	**50**	**43**						

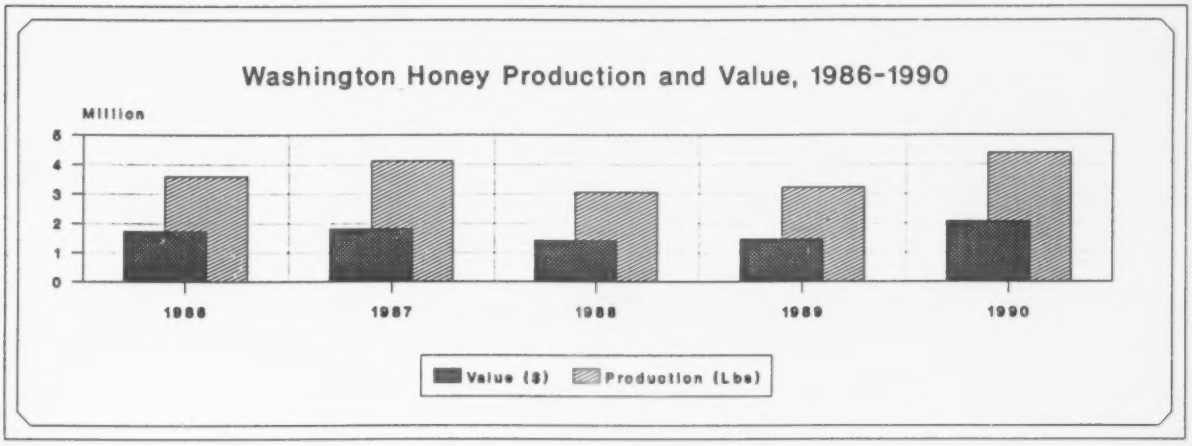
1/ Included in other to avoid disclosure of individual operations.

BEES AND HONEY

Honey production in Washington during 1990 from producers having 5 or more colonies amounted to 4.4 million pounds, up 37 percent from last year. There were 80 thousand colonies producing honey, up 10 thousand colonies from 1989. Honey yields were widely varied, but averaged 55 pounds, up 9 pounds from last year.

Price for the 1990 honey crop rose to an average price of 47 cents per pound. This is compared to the revised 45 cents received the previous year.

Adverse conditions were encountered last year; including minimum nectar supplies, restrictions on cross-state movement early in the year, disease, and mite infestations throughout the year.



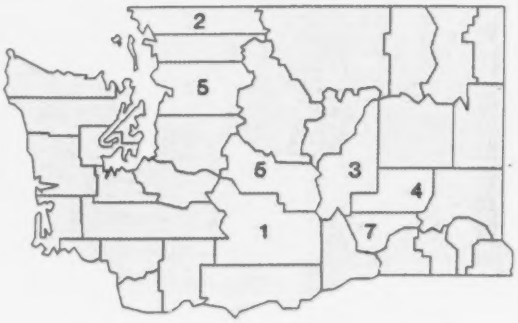
Bees: Number of Colonies, Stocks, Production, Price, and Value

Year	Number Of Colonies	Dec. 15 Stocks 2/	Honey			
			Production		Value	
			Per Colony	Total	Per Pound	Total
	1,000	1,000 Pounds	Pounds	1,000 Pounds	Cents	1,000 Dollars
1978	90	630	35	3,150	54.9	1,729
1979	87	364	38	3,306	54.0	1,785
1980	90	454	42	3,780	57.0	2,155
1981	87	487	35	3,045	57.0	1,736
1982-85 1/	-	-	-	-	-	-
1986	75	360	48	3,600	48.0	1,728
1987	75	206	55	4,125	44.0	1,815
1988	65	306	47	3,055	46.0	1,405
1989	70	579	46	3,220	45.0	1,449
1990	80	440	55	4,400	47.0	2,068

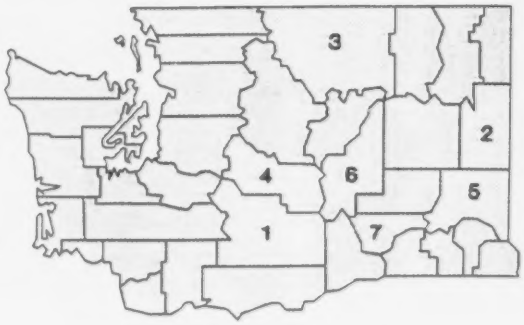
1/ Estimates not made 1982-85. 2/ Stocks in hands of producers.

- Not available.

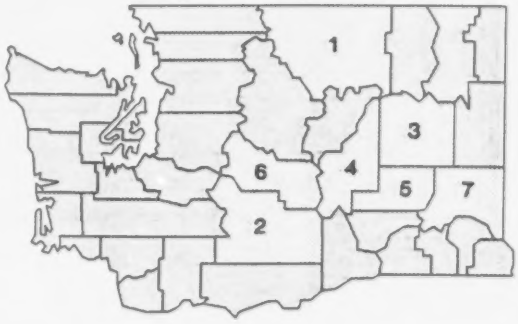
Top Ranked Counties - All Cattle & Calf Inventory
January 1, 1991



Top Ranked Counties - Sheep & Lamb Inventory
January 1, 1991



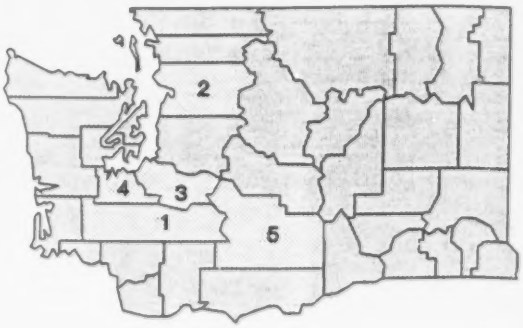
Top Ranked Counties - Beef Cow Inventory
January 1, 1991



Top Ranked Counties - Hog & Pig Inventory
December 1, 1990

Top Ranked Counties - Milk Cow Inventory
January 1, 1991

Top Ranked Counties - Commercial Broiler Production
1990



All Cattle and Calf Inventory By County, January 1

County and District	1987	1988	1989	1990	1991
West			**Head**		
Clallam	8,700	8,600	8,600	9,000	9,000
Clark	33,500	33,300	33,000	35,000	35,000
Cowlitz	8,100	8,000	8,000	8,500	9,000
Grays Harbor	16,900	16,800	17,000	17,000	17,000
Island	6,900	6,900	7,000	8,000	9,000
Jefferson	3,900	3,900	3,900	5,000	4,800
King	36,700	36,400	37,000	38,000	45,000
Kitsap	1,800	1,800	1,900	2,000	2,000
Lewis	42,000	41,700	42,000	46,000	46,000
Mason	1,600	1,600	1,600	1,600	1,400
Pacific	8,900	8,800	9,000	11,000	10,900
Pierce	29,100	28,900	29,000	29,000	33,000
San Juan	2,300	2,300	2,400	2,200	2,200
Skagit	43,700	43,400	43,000	50,000	49,000
Skamania	1,000	1,000	1,000	1,000	1,000
Snohomish	50,000	49,700	50,000	56,000	56,000
Thurston	21,700	21,500	21,700	23,000	23,700
Wahkiakum	6,800	6,800	6,900	7,700	8,000
Whatcom	109,400	108,600	110,000	121,000	123,000
Total	**433,000**	**430,000**	**433,000**	**471,000**	**485,000**
Central					
Benton	31,700	31,400	32,000	16,000	16,000
Chelan	2,200	2,200	3,000	3,000	3,000
Kittitas	50,800	50,400	55,000	54,000	56,000
Klickitat	30,800	30,500	30,000	29,000	29,000
Okanogan	54,300	53,800	50,000	53,000	65,000
Yakima	183,200	181,700	183,000	182,000	170,000
Total	**353,000**	**350,000**	**353,000**	**337,000**	**339,000**
Northeast					
Ferry	16,800	16,600	16,500	19,000	21,000
Pend Oreille	6,500	6,400	6,500	7,000	7,000
Spokane	30,000	29,700	30,000	31,000	30,000
Stevens	36,700	36,300	36,000	35,000	34,000
Total	**90,000**	**89,000**	**89,000**	**92,000**	**92,000**
East Central					
Adams	93,700	93,100	94,000	95,000	103,000
Douglas	17,900	17,800	18,000	19,000	19,000
Franklin	70,400	70,000	71,000	68,000	52,000
Grant	97,300	96,600	98,000	98,000	104,000
Lincoln	39,700	39,500	40,000	41,000	39,000
Total	**319,000**	**317,000**	**321,000**	**321,000**	**317,000**
Southeast					
Asotin	10,300	10,200	10,200	11,000	11,000
Columbia	6,900	6,800	6,600	6,000	6,000
Garfield	12,100	12,000	12,200	13,000	16,000
Walla Walla	44,300	43,900	44,000	43,000	41,000
Whitman	31,400	31,100	31,000	36,000	33,000
Total	**105,000**	**104,000**	**104,000**	**109,000**	**107,000**
State Total	**1,300,000**	**1,290,000**	**1,300,000**	**1,330,000**	**1,340,000**

Beef Cows That Have Calved Inventory By County, January 1

County and District	1987	1988	1989	1990	1991
West			**Head**		
Clallam	3,400	3,100	3,000	3,200	3,100
Clark	9,300	8,400	8,500	8,900	9,000
Cowlitz	3,300	3,000	3,000	3,300	3,300
Grays Harbor	3,100	2,800	2,900	2,900	2,900
Island	1,400	1,300	1,300	2,000	2,000
Jefferson	1,000	900	900	1,500	1,500
King	4,100	3,700	3,800	4,100	4,000
Kitsap	1,000	900	900	900	900
Lewis	10,300	9,300	9,500	11,300	11,500
Mason	700	600	600	600	600
Pacific	3,800	3,400	3,500	4,900	5,000
Pierce	4,700	4,300	4,400	4,400	4,400
San Juan	1,300	1,200	1,200	1,000	1,000
Skagit	4,100	3,700	3,700	4,000	3,900
Skamania	300	300	300	300	300
Snohomish	5,900	5,300	5,400	5,900	5,800
Thurston	5,000	4,500	4,500	4,900	4,900
Wahkiakum	2,000	1,800	1,800	2,000	1,900
Whatcom	6,900	6,200	6,300	6,900	7,000
Total	**71,600**	**64,700**	**65,500**	**73,000**	**73,000**
Central					
Benton	16,300	14,700	12,000	7,500	7,800
Chelan	1,500	1,400	1,500	1,500	1,500
Kittitas	21,600	19,500	20,000	21,000	21,400
Klickitat	16,700	15,100	15,500	15,000	14,900
Okanogan	35,100	31,700	34,000	35,500	35,900
Yakima	30,500	27,500	30,000	31,500	30,500
Total	**121,700**	**109,900**	**113,000**	**112,000**	**112,000**
Northeast					
Ferry	11,600	10,500	10,500	10,500	10,600
Pend Oreille	3,800	3,400	3,500	3,500	3,500
Spokane	13,500	12,200	12,500	15,000	15,100
Stevens	16,100	14,500	15,000	13,000	12,800
Total	**45,000**	**40,600**	**41,500**	**42,000**	**42,000**
East Central					
Adams	22,600	20,400	21,000	24,000	24,300
Douglas	9,300	8,400	8,500	9,000	9,100
Franklin	18,500	16,700	20,000	19,000	18,000
Grant	31,800	28,700	27,000	27,000	26,700
Lincoln	27,300	24,700	24,000	26,000	26,900
Total	**109,500**	**98,900**	**100,500**	**105,000**	**105,000**
Southeast					
Asotin	5,500	5,000	4,600	4,900	4,900
Columbia	4,300	3,900	2,900	2,900	2,900
Garfield	7,900	7,100	6,500	7,800	7,800
Walla Walla	7,400	6,700	7,000	6,900	6,900
Whitman	19,100	17,200	17,500	20,500	20,500
Total	**44,200**	**39,900**	**38,500**	**44,300**	**43,000**
State Total	**392,000**	**354,000**	**359,000**	**375,000**	**375,000**

Milk Cows That Have Calved Inventory By County, January 1

County and District	1987	1988	1989	1990	1991
West			**Head**		
Clallam	1,000	1,000	1,000	1,100	1,300
Clark	8,200	8,500	8,500	8,900	9,300
Cowlitz	1,200	1,300	1,300	1,400	1,600
Grays Harbor	5,400	5,600	5,600	5,900	6,100
Island	2,100	2,200	2,200	2,400	2,300
Jefferson	700	700	700	800	1,200
King	16,500	17,100	17,000	17,600	21,600
Kitsap	1/	1/	1/	1/	1/
Lewis	11,200	11,600	11,600	12,300	12,100
Mason	1/	1/	1/	1/	1/
Pacific	1,800	1,900	1,900	1,900	1,900
Pierce	11,700	12,200	12,100	12,300	13,200
San Juan	1/	1/	1/	1/	1/
Skagit	18,100	18,800	18,700	20,000	21,100
Skamania	1/	1/	1/	1/	1/
Snohomish	21,600	22,400	22,400	23,400	24,800
Thurston	6,700	7,000	7,000	7,300	7,600
Wahkiakum	1,700	1,800	1,800	1,900	2,000
Whatcom	52,400	54,400	54,400	56,400	59,300
Other	300	300	300	300	300
Total	**160,600**	**166,800**	**166,500**	**173,900**	**185,700**
Central					
Benton	800	800	1,000	1,100	1,200
Chelan	1/	1/	1/	1/	1/
Kittitas	1,000	1,100	1,000	900	1,000
Klickitat	1,000	1,000	1,000	900	1,000
Okanogan	1/	1/	1/	1/	1/
Yakima	23,700	24,600	24,500	25,900	29,000
Other	200	200	200	300	300
Total	**26,700**	**27,700**	**27,700**	**29,100**	**32,500**
Northeast					
Ferry	1/	1/	1/	1/	1/
Pend Oreille	1/	1/	1/	1/	1/
Spokane	3,500	3,600	3,600	3,700	3,900
Stevens	3,700	3,900	3,700	3,800	4,100
Other	300	300	400	400	400
Total	**7,500**	**7,800**	**7,700**	**7,900**	**8,400**
East Central					
Adams	1,900	2,000	2,000	1,800	1,800
Douglas	1/	1/	1/	1/	1/
Franklin	2,700	2,800	2,800	2,600	2,600
Grant	7,100	7,400	7,400	7,700	7,900
Lincoln	1/	1/	1/	1/	1/
Other	100	100	300	400	400
Total	**11,800**	**12,300**	**12,500**	**12,500**	**12,700**
Southeast					
Asotin	1/	1/	1/	1/	1/
Columbia	1/	1/	1/	1/	1/
Garfield	1/	1/	1/	1/	0
Walla Walla	1,000	1,000	1,100	1,100	1,200
Whitman	300	300	300	300	300
Other	100	100	200	200	200
Total	**1,400**	**1,400**	**1,600**	**1,600**	**1,700**
State Total	**208,000**	**216,000**	**216,000**	**225,000**	**241,000**

1/ Included in "other".

Sheep and Lamb Inventory By County, January 1

County and District	1987	1988	1989	1990	1991
West			**Head**		
Clallam	1,500	1,500	1,700	1,300	1,300
Clark	1,700	2,000	1,800	2,200	1,900
Cowlitz	800	850	700	700	600
Grays Harbor	400	450	300	300	300
Island	300	350	300	400	300
Jefferson	200	150	100	100	100
King	1,000	1,300	1,400	1,600	1,400
Kitsap	1,100	1,200	800	900	700
Lewis	2,400	2,400	2,500	2,000	1,900
Mason	200	200	200	200	100
Pacific	250	200	200	200	100
Pierce	800	800	1,100	1,200	1,100
San Juan	2,300	1,700	1,700	2,000	1,700
Skagit	500	600	600	700	600
Skamania	250	300	200	200	200
Snohomish	1,800	1,900	1,900	2,200	1,900
Thurston	1,100	1,100	1,200	1,500	1,300
Wahkiakum	200	200	800	800	600
Whatcom	700	600	500	500	400
Total	**17,500**	**17,800**	**18,000**	**19,000**	**16,500**
Central					
Benton	2,800	2,800	2,000	1,800	1,300
Chelan	300	400	300	400	300
Kittitas	5,800	6,000	4,700	6,400	5,000
Klickitat	2,500	3,000	3,000	3,700	2,800
Okanogan	2,300	2,500	4,900	6,500	5,400
Yakima	11,000	21,900	21,900	24,200	19,700
Total	**24,700**	**36,600**	**36,800**	**43,000**	**34,500**
Northeast					
Ferry	500	500	400	400	500
Pend Oreille	300	300	200	200	300
Spokane	2,000	2,500	3,700	4,300	5,500
Stevens	1,700	1,700	1,600	1,600	2,200
Total	**4,500**	**5,000**	**5,900**	**6,500**	**8,500**
East Central					
Adams	900	1,000	900	1,400	1,400
Douglas	600	500	400	400	400
Franklin	2,000	2,300	3,400	3,500	3,800
Grant	3,000	3,200	3,700	4,500	4,600
Lincoln	1,500	1,500	1,300	1,200	1,300
Total	**8,000**	**8,500**	**9,700**	**11,000**	**11,500**
Southeast					
Asotin	350	350	200	300	800
Columbia	300	300	200	200	500
Garfield	450	450	200	400	1,000
Walla Walla	1,400	1,000	1,000	1,000	2,900
Whitman	1,800	2,000	2,000	1,600	4,800
Total	**4,300**	**4,100**	**3,600**	**3,500**	**10,000**
State Total	**59,000**	**72,000**	**74,000**	**83,000**	**81,000**

Hog and Pig Inventory By County, December 1

County and District	1986	1987	1988	1989	1990
West			**Head**		
Clallam	200	250	300	300	200
Clark	700	600	900	900	1,300
Cowlitz	100	100	200	200	200
Grays Harbor	200	200	150	150	100
Island	200	150	150	150	100
Jefferson	100	100	50	50	50
King	900	800	1,300	1,300	1,000
Kitsap	400	500	300	300	200
Lewis	300	300	500	500	400
Mason	100	100	100	100	100
Pacific	150	150	200	200	1,000
Pierce	500	400	1,000	1,200	1,400
San Juan	50	50	50	50	50
Skagit	100	100	400	400	300
Skamania	50	50	50	50	50
Snohomish	500	500	600	600	500
Thurston	400	400	700	700	500
Wahkiakum	50	50	50	50	50
Whatcom	500	500	1,500	1,800	1,500
Total	**5,500**	**5,300**	**8,500**	**9,000**	**9,000**
Central					
Benton	1,800	1,900	1,400	1,100	600
Chelan	300	300	300	300	200
Kittitas	2,100	2,200	1,200	800	600
Klickitat	800	800	600	800	1,100
Okanogan	1,100	1,400	1,000	900	700
Yakima	2,200	2,200	1,900	2,100	1,800
Total	**8,300**	**8,800**	**6,400**	**6,000**	**5,000**
Northeast					
Ferry	200	200	100	100	100
Pend Oreille	400	400	200	200	200
Spokane	3,400	3,400	4,300	3,500	3,000
Stevens	3,400	3,500	3,600	4,200	3,700
Total	**7,400**	**7,500**	**8,200**	**8,000**	**7,000**
Adams	1,400	1,500	3,500	3,000	3,000
Douglas	500	400	800	800	800
Franklin	3,100	3,400	2,200	3,000	5,000
Grant	6,200	6,500	7,100	6,500	6,500
Lincoln	2,000	2,000	1,400	1,700	1,700
Total	**13,200**	**13,800**	**15,000**	**15,000**	**17,000**
Southeast					
Asotin	400	400	400	400	400
Columbia	1,000	1,200	1,000	800	1,700
Garfield	900	900	700	600	500
Walla Walla	1,000	1,100	1,800	2,200	2,200
Whitman	12,300	16,000	11,000	14,000	13,200
Total	**15,600**	**19,600**	**14,900**	**18,000**	**18,000**
State Total	**50,000**	**55,000**	**53,000**	**56,000**	**56,000**

Commercial Broiler Production By County

District	1986	1987	1988	1989	1990
			Head		
Clark	1,908,000	1,990,000	2,023,000	2,190,000	2,850,000
Cowlitz	1,682,000	1,755,000	1,837,000	1,988,000	1,760,000
Grays Harbor	125,000	130,000	276,000	299,000	345,000
King	1,757,000	1,935,000	1,818,000	1,968,000	905,000
Lewis	4,719,000	5,027,000	5,223,000	5,655,000	6,785,000
Pierce	3,489,000	3,742,000	2,972,000	3,217,000	3,950,000
Skagit	527,000	550,000	600,000	650,000	1,470,000
Snohomish	4,468,000	4,765,000	3,872,000	4,193,000	5,600,000
Thurston	3,162,000	3,400,000	3,714,000	4,022,000	4,400,000
Whatcom	2,309,000	2,510,000	2,584,000	2,798,000	1,805,000
Yakima	552,000	576,000	2,974,000	3,220,000	3,130,000
Other	402,000	420,000	307,000	300,000	300,000
State Total	**25,100,000**	**26,800,000**	**28,200,000**	**30,500,000**	**33,300,000**

Mink - Females Bred By County

County	1987	1988	1989	1990	1991
			Head		
King	3,400	3,000	4,200	2,000	2,000
Pierce	11,900	14,900	10,600	6,600	6,000
Snohomish	19,300	20,400	21,700	14,300	13,400
Thurston	6,000	6,700	6,200	4,800	2,100
Whatcom	5,200	5,400	6,300	5,500	5,700
Kittitas	10,300	12,400	11,200	8,000	9,200
Other	1,100	1,600	1,800	1,600	0
State Total	**57,200**	**61,400**	**62,000**	**42,800**	**38,400**

Mink - Pelts Produced By County

County	1986	1987	1988	1989	1990
			Pelts		
King	10,500	10,400	12,200	14,700	5,400
Pierce	42,700	45,300	46,400	36,600	27,000
Snohomish	72,800	69,000	78,700	87,200	55,300
Thurston	21,700	22,300	24,100	19,700	20,300
Whatcom	19,300	18,600	22,400	22,500	20,300
Kittitas	46,200	48,300	54,600	50,700	38,600
Other	4,100	6,000	5,600	5,800	5,500
State Total	**217,300**	**219,900**	**244,000**	**237,200**	**172,400**

AQUACULTURE

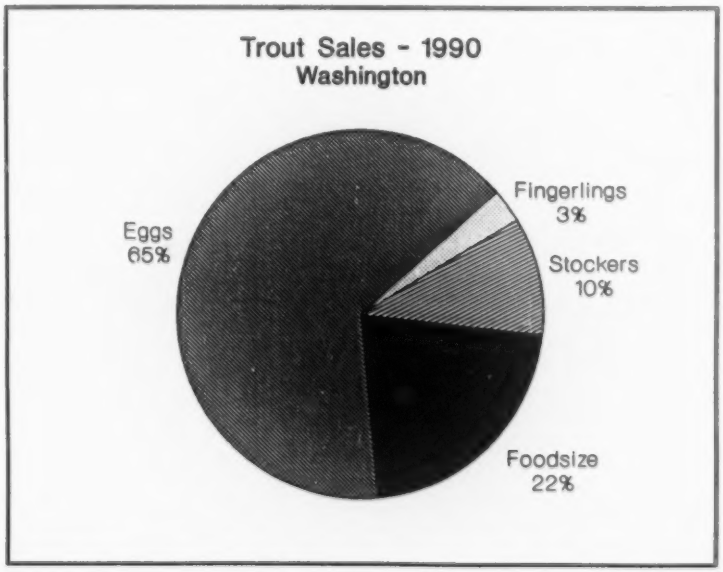
Fresh Water Trout Survey

The Washington Agriculture Statistics Service (WASS) conducts an annual survey of commercially produced freshwater trout and eggs. The value of sales was estimated at $4.8 million for the 12-month period of September 1, 1989 through August 31, 1990. Sales increased 13 percent compared to the previous year.

Washington is the fifth ranking state in the nation for trout sales following Idaho as the lead state with $33.1 million; California, Pennsylvania, and North Carolina had sales of $11.7, $6.1, and $4.9 respectively. There were 37 freshwater trout operations in Washington during the current year compared with 34 operations the previous year. There are 15 states is the annual trout survey with a combined total value of sales at $76.9 million.

Trout: Number of Operations with Sales and Total Sales For the Periods of Sept. 1 - Aug. 31.

State	Number of Operations		Total Sales	
	1989	1990	1989	1990
	Number		1,000 Dollars	
California	24	25	8,848	11,148
Idaho	24	25	28,766	33,065
North Carolina	75	75	7,710	4,900
Pennsylvania	39	38	4,333	6,140
Utah	10	8	4,731	3,512
Washington	34	37	4,230	4,764
Total 15 states	**469**	**461**	**71,732**	**76,908**



The static or declining nature of both value and production for shellfish and finfish is due to a combination of local, national, and international conditions.

The farmed salmon industry is suffering from an international glut of farmed fish, which has resulted in the lowest prices ever seen for this fresh product. Overproduction in Norway and elsewhere has resulted in farm failures in several countries and has an obvious impact on Washington producers. But even with strong competition from Canada, Chile, and elsewhere, salmon farmers continue to stay competitive by fine tuning their production. Improved management practices and nutrition have allowed them to improve their yields and maintain through the period of low market value conditions. There were also farm losses due to periodic plankton blooms, but improved technology has provided some protection from this seasonal threat.

The persistent problem for the oyster industry relates to the continued expansion of populations of ghost and mud shrimp in Willapa Bay and Grays Harbor along the Pacific Coast. The epidemic results in sandy or muddy oyster beds which will not support the oyster throughout its development. Control methods are available, but regulatory constraints prevent adequate control of this shrimp epidemic. New methods of control are being explored, and it is hoped that new techniques will stabilize the growing beds which could result in a three-fold increase in oyster production. Abnormal weather conditions along the coast also reduced total oyster production in both 1989 and 1990. The Puget Sound industry is relatively stable, but the chronic loss of production areas continues to cause a decline. As human population increases, oyster growers are faced with negative impacts on water quality. Since 1980, the downgrade in water quality has affected more than 25 percent of Puget Sound's commercial shellfish beds. Even with these serious demographic and production problems, Washington State continues to be a major contributor for the United States shellfish production. Washington and Louisiana are the two primary oyster producing states.

In recent years, the clam production has suffered from poor natural seed sets or spawn. Recent breakthroughs and progress in hatchery technology and management is very promising for clam growers. When clam seed is grown in the hatchery in large numbers and successfully planted onto beds, increases in clam production will be possible. The limiting factors will be similar to oyster production constraints. Appropriate habitat and an adequate water quality must be available. There is a strong market for clams throughout the U.S. and increased production in the State will boost aquaculture value in the future.

The status of the trout industry continues to be stable and even post modest gains. This well established industry continues to provide high quality product for local markets. Growers of rainbow trout eggs continue to be national leaders and provide eggs for the national and international market.

Aquaculture Production and Value, Washington, 1986-1990

Species	Quantity					Ex-Vessel Value				
	1986	1987	1988	1989	Prel. 1990	1986	1987	1988	1989	Prel. 1990
Fish	1,000 Pounds					1,000 Dollars				
Pacific Salmon 1/										
Market	2,532	3,362	3,554	2,214	1,556	3,738	5,001	5,690	3,574	2,790
Juvenile	NA	6	*	127	166	NA	25	2	722	884
Eggs	16	11	19	17	18	435	312	678	610	676
Trout										
Market	327	260	278	679	372	593	555	522	1,654	710
Juvenile	63	74	47	108	41	141	194	243	830	203
Eggs	50	61	70	61	67	1,507	1,889	2,577	2,568	3,372
Atlantic Salmon										
Market	18	248	1,977	2,187	1,433	67	1,176	9,615	8,320	4,542
Juvenile	8	28	19	42	102	265	553	314	464	1,676
Eggs	NA	2	1	*	1	NA	263	200	11	91
Total Market	**2,878**	**3,870**	**5,809**	**5,080**	**3,361**	**4,399**	**6,732**	**15,827**	**13,547**	**8,042**
Total Juvenile	**71**	**108**	**66**	**278**	**310**	**406**	**773**	**559**	**2,015**	**2,771**
Total Eggs	**66**	**74**	**91**	**78**	**86**	**1,942**	**2,464**	**3,456**	**3,189**	**4,139**
Total Fish	**3,014**	**4,052**	**5,965**	**5,436**	**3,757**	**6,747**	**9,969**	**19,842**	**18,751**	**14,952**
Clams										
Littleneck	926	995	802	467	372	754	541	561	436	395
Manila	3,696	3,159	3,364	3,409	2,908	3,460	2,472	3,816	2,624	2,450
Mussels	297	285	486	426	558	349	343	622	527	765
Other	572	232	159	20	22	159	120	77	7	188
Total Clams	**5,491**	**4,671**	**4,811**	**4,322**	**3,860**	**4,722**	**3,476**	**5,076**	**3,594**	**3,798**
Oysters										
Olympia	7	7	39	6	53	167	110	1,338	88	95
Pacific	8,639	9,352	8,920	8,907	7,973	10,993	10,254	13,393	10,152	8,804
Other 2/	13	17	78	14	62	520	530	3,468	676	638
Total Oysters	**8,652**	**9,369**	**8,998**	**8,921**	**8,035**	**11,513**	**10,784**	**16,861**	**10,828**	**9,442**
Total Aquaculture	**17,157**	**18,092**	**19,781**	**18,702**	**15,655**	**22,964**	**24,229**	**41,778**	**33,207**	**28,194**

1/ Includes Chinook and Coho.
2/ Oyster Seed included in value only.
N/A Data not available.
* Less than 500. Sum of data may not add to totals due to rounding.

Source: Department of Fisheries, State of Washington.

Washington Agricultural Statistics Service

Current estimates of the data published in this bulletin are available throughout the year. The following table identifies the types of data available for each commodity by month. The current estimates are published in a semi-monthly publication "Agri-Facts". The annual subscription fee for "Agri-Facts" is $15 per year. Reporters for our surveys receive reports free of charge.

Washington Agricultural Statistics Service Reports

Commodity	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	A = Acreage, P = Production, X = Estimates Released, PU = Production and Utilization, PDI = Production, Disposition, and Income, S = Stocks.											
Winter Wheat	A,P				A,P	A,P	A,P	A,P		A,P		
Spring Wheat	A,P		A				A,P	A,P	A,P			
Barley	A,P		A			A	A,P	A,P	A,P	A,P		
Oats	A,P		A			A	A,P	A,P		A,P		
Field Corn			A			A						
For Grain	A,P							A,P	A,P	A,P	A,P	
For Silage	A,P											
Dry Edible Beans	A,P		A			A		A,P	A,P	A,P	A,P	A,P
Dry Peas and Lentils	A,P									A,P		
Potatoes	A,P,S	S	S	S	S		A		A,PU		A,P	S
Hops	A,P		S			P	A	P	S			
Hay	A,P,S		A		S	A		A,P		A,P		
Mint	A,P											
Grain Stocks	S		S			S			S			
Apples	PU						PU	P		P		
Apricots	PU					P	PU					
Cherries, Sweet	PU					P	P					
Grapes	PU						PU	P	P	P		
Peaches	PU					P	P	P				
Pears, Bartlett	PU					P	PU	P	P			
Pears, Other	PU						PU	P	P			
Prunes	PU							P	P	P		
Cranberries	A,P							P				
Strawberries	A,P					A,P			A,P			A,P
Onions: Storage	A,P		A				A		A,P	A,P		
Non-Storage	A,P		A		A		A,P	A,P				
Vegetables	A,P		A			A,P	A,P	A,P	A,P			
Cattle on Feed	X	X		X			X			X		
Cattle Inventory & Calf Crop		X		PDI								
Milk Production	X	X	X	X	X	X	X	X	X	X	X	X
Manufactured Dairy Products	X	X	X	X	X	X	X	X	X	X	X	X
Sheep Inventory & Lamb Crop		X		PDI								
Wool Production			X									
Hog Inventory & Pig Crop	X			PDI								
Livestock Slaughter	X	X	X	X	X	X	X	X	X	X	X	X
Egg Production	X	X	X	X	X	X	X	X	X	X	X	X
Hatchery and Broilers				PDI								
Bees and Honey		X										
Mink							X					
Farm Labor	X			X	X	X	X	X	X	X		

WSU COOPERATIVE EXTENSION SERVICE COUNTY AGENTS

County	Address	City	Phone
Adams	210 W. Broadway	Ritzville 99169	(509) 659-0090
Asotin	P.O. Box 9	Asotin 99402	(509) 243-4118
Benton	1121 Dudley Avenue	Prosser 99350	(509) 786-5609
Chelan	400 Washington St	Wenatchee 98801	(509) 664-5540
Clallam	223 E. 4th St	Port Angeles 98362	(206) 452-7831
Clark	2400 T St	Vancouver 98661	(206) 696-8411
Columbia	202 S 2nd St	Dayton 99328	(509) 382-4741
Cowlitz	207 4th Ave N	Kelso 98626	(206) 577-3014
Douglas	Courthouse, Box 550	Waterville 98858	(509) 745-8531
Ferry	P.O. Box 345	Republic 99166	(509) 775-5235
Franklin	Courthouse	Pasco 99301	(509) 545-3511
Garfield	Courthouse	Pomeroy 99347	(509) 843-3701
Grant	P.O. Box 37	Ephrata 98823	(509) 754-2011
Grays Harbor	P.O. Box 552	Montesano 98563	(206) 249-4332
Island	Courthouse, P.O. Box 5000	Coupeville 98239	(206) 679-7327
Jefferson	P.O. Box 572	Port Townsend 98368	(206) 385-9158
King	506 Second Ave, Room 612	Seattle 98104	(206) 296-3986
Kitsap	P.O. Box 146	Port Orchard 98366	(206) 876-7157
Kittitas	Courthouse, 5th & Main	Ellensburg 98926	(509) 962-7507
Klickitat	228 W Main, Room 210	Goldendale 98620	(206) 773-5817
Lewis	P.O. Box 708	Chehalis 98532	(206) 748-9121
Lincoln	P.O. Box 399	Davenport 99122	(509) 725-4171
Mason	9 Federal Bldg	Shelton 98584	(206) 427-9670
Okanogan	Courthouse, P.O. Box 391	Okanogan 98840	(509) 422-3670
Pacific	P.O. Box 88	South Bend 98586	(206) 875-9331
Pend Oreille	P.O. Box 5000	Newport 99156	(509) 447-2401
Pierce	3049 S. 36th St	Tacoma 98409	(206) 591-7180
San Juan	P.O. Box 609	Friday Harbor 98250	(206) 378-4414
Skagit	112 County Admin Bldg	Mount Vernon 98273	(206) 336-9322
Skamania	P.O. Box 790	Stevenson 98648	(509) 427-5141
Snohomish	600 128th St SE	Everett 98208	(206) 338-2400
Spokane	N 222 Havana	Spokane 99202	(509) 456-3651
Stevens	230 Williams Lake Rd	Colville 99114	(509) 684-2588
Thurston	921 Lakeridge Dr SW, Room 216	Olympia 98502	(206) 786-5445
Wahkiakum	P.O. Box 278	Cathlamet 98612	(206) 795-3278
Walla Walla	314 W Main St	Walla Walla 99362	(509) 527-3260
Whatcom	1000 N Forest St	Bellingham 98225	(206) 676-6736
Whitman	310 N Main	Colfax 99111	(509) 397-6290
Yakima	233 Courthouse	Yakima 98901	(509) 575-4218